

Planning Commission Application Summary

Project Name: Hidden Canyon Estates Preliminary Subdivision Plat
Address: Approximately 15000 South Suncrest Dr.
Current Zoning: RM (Multi-family Residential) and C-3 (Commercial) zone
Hearing Date: March 24, 2016

Summary of Request

This application is a request for approval of a Preliminary Subdivision Plat for approximately 103 acres located on the east side of Suncrest Dr., at approximately 15000 South Suncrest Dr. The property is currently zoned RM (Multi-family Residential) and C-3 (Commercial). The applicant is requesting that a Preliminary Subdivision Plat be approved to allow for the development of the currently vacant site as a single-family residential neighborhood.

Background

The City entered into a Development Agreement with the property owner and Edge Homes on April 13, 2015. The agreement approved certain development conditions on the property, including an allowance for a maximum of 300 single-family dwelling units on lots of at least 7,500 square feet in size. It also requires any subdivision on the property to be a part of the Traverse Ridge Special Service District (TRSSD). Provisions for trails and a trail heads were also included in the agreement.

General Plan and Zoning

The Land Use Map of the General Plan calls for the Residential Hillside Low Density, Neighborhood Commercial and Open Space/Parks land use designations for the subject property. The Residential Hillside Low Density category “includes areas of very large lot single-family neighborhoods or ranchettes as well as areas situated in the surrounding mountains and hillsides, as well as environmentally designed clustered housing.” The Neighborhood Commercial category “permits commercial land uses that target local residents and neighborhoods.” It also states that “medium and high density residential also is appropriate.” The Open Space/Parks category “encompasses the City’s established parks..and large..areas that have recreational potential and natural area open space.” The property has been assigned the RM (Multi-family Residential) and C-3 (Commercial) zoning classification. The RM zone supports up to 12 dwelling units per acre. The C-3 is an old commercial designation that supported general commercial uses.

Analysis

The subdivision will include nine phases. The applicant plans on developing the first eight phases, with the last Phase 9 being developed by the existing property owner. The Development Agreement limits the number of homes without a second access to 50. This means the applicant will be able to obtain building permits for lots within Phases 1-3 without the planned secondary access.

The main access into the development will be via Suncrest Drive, and more specifically the access road to the City’s regional detention basin. Roads will be public streets. A secondary access point will be from a future stub road into the Edelweiss Subdivision. There will be 300

single-family lots in total. Per the Development Agreement, each lot will have at least 7,500 square feet of area, with the largest lot being 90,090 square feet and the smallest lot being 7,766 square feet.

The Development Agreement requires the developer to install trail and trailhead improvements or provide the City with \$500,000 to be used for trail and trailhead improvements. The developer has opted for the second choice, and a requirement to provide the \$500,000 with the first or second phase.

The applicant will be dedicating two parcels to the city with the plat. The first parcel will be dedicated with the Phase 1 Final Plat and include 13,928 square feet of open space area. This space can be used by the city to help with trail head improvements or other amenities along the trail ways. The second parcel will be dedicated with Phase 6 Final Plat and include 7,915 square feet of open space contiguous with the City's regional detention basin.

Per the Development Agreement, the applicant will be providing a wrought iron fence along the shared property line of the subdivision and the City's open space. This will prevent future home owners from encroaching onto City property.

Deviations (If applicable)

Street Design: The applicant is requesting approval of a street design modification. They are specifically requesting a 50-foot wide public right-of-way. The Draper City Master Transportation Plan calls for a minimum 56-foot wide right-of-way on mountain local roads. The difference between the two is the amount of asphalt, shoulder and curb and gutter provided. The City's typical mountain local street standard calls for 24-feet of travel lane, with 4-feet of shoulder and 2-feet of curb and gutter per side of the street center line, along with a 5-foot side walk and 5-foot parkstrip on either side. The applicant is proposing 25-feet of travel lane, with 2.5-feet of curb and gutter per side of the street center line, and 5-feet sidewalk and 5-feet parkstrip on either side. The cross section for the proposed streets can be found in Exhibit K of this staff report.

The Subdivision Ordinance allows the City Council to waive the street design requirements in DCMC Section 17-5-030(D) after receiving a recommendation from the Planning Commission. This section does not provide set standards for approval.

17-5-030: STREETS:

D. Curbs, Gutters, Sidewalks: Curbs, gutters, and sidewalks shall be installed on existing and proposed streets by the subdivider in all subdivisions. The city council may, after receiving a recommendation from the planning commission, modify or waive the street design requirements.

Staff has reviewed the request and is recommending approval of a 50-foot wide right-of-way. The proposed configuration will better match up with the design for Edelweiss than the City's standard cross section. The single-family section of Edelweiss has been approved with a 46-foot

wide right-of-way. Hidden Canyon Estates has designed the stub road into Edelweiss to match their 46-foot wide street cross section.

Slope Development. The applicant is requesting a deviation to build within some areas of 30% slope or greater. Exhibits E and F show the pre-development slopes and the post-development slopes. There are approximately 43 out of the 300 lots that will be affected, with those lots containing least 30% or greater slope areas. Some of the lots will be mass graded to allow development, while some will remain in their natural slopes. Draper City Municipal Code 9-16-040(A) outlines guidelines the Planning Commission can use to approve encroachment into slope area.

9-16-040: DEVELOPMENT REQUIREMENTS:

- A. Development In General: Slope areas in excess of thirty percent (30%) may not be developed, and no more than thirty percent (30%) of a development's slope areas in excess of thirty percent (30%) may be included in the area calculation to determine density. The planning commission may modify this requirement upon finding that:
1. No significant harm will result;
 2. The proposed modification will result in a more functional and improved plan; and
 3. The developer/builder agrees to comply with any conditions or requirements imposed by the planning commission to mitigate any adverse effects which may result from the proposed modification.

City Staff and the City's geo-technical and geo-hazards consultants have reviewed the grading plans and determined that the proposed plans are not concerning in regards to slope.

Staff Recommendation

Staff recommends approval, subject to several conditions of approval as listed in the staff report.

Model Motions

Preliminary Subdivision Plat:

Sample Motion for a Positive Recommendation – "I move we forward a positive recommendation to the City Council for the Hidden Canyon Estates Preliminary Subdivision Plat Request by Steve Maddox, representing Edge Homes for the purpose of creating a 300 lot single-family subdivision, application #150716-15000S, based on the findings and subject to the conditions listed in the Staff Report dated March 9, 2016 and as modified by the conditions below:"

1. List any additional findings and conditions...

Sample Motion for a Negative Recommendation – "I move we forward a negative recommendation to the City Council for the Hidden Canyon Estates Preliminary Subdivision Plat Request by Steve Maddox, representing Edge Homes for the purpose of creating a 300 lot

single-family subdivision, application #150716-15000S, based on the following findings:"

1. List any additional findings...

Street Design Modification:

Sample Motion for a Positive Recommendation – "I move we forward a positive recommendation to the City Council for the Hidden Canyon Estates Street Design Modification Request by Steve Maddox, representing Edge Homes for the purpose of approving a 50-foot wide right-of-way, application #150716-15000S, based on the findings and subject to the conditions listed in the Staff Report dated March 9, 2016 and as modified by the conditions below:"

1. List any additional findings and conditions...

Sample Motion for a Negative Recommendation – "I move we forward a negative recommendation to the City Council for the Hidden Canyon Estates Street Design Modification Request by Steve Maddox, representing Edge Homes for the purpose of approving a 50-foot wide right-of-way, application #150716-15000S, based on the following findings:"

1. List any additional findings...

Deviation to Build within a 30% or Greater Slope Area:

Sample Motion for a Positive Recommendation – ""I move we approve the Hidden Canyon Estates Deviation to Build within a 30% or Greater Slope Area Request by Steve Maddox, representing Edge Homes for the purpose of approving development on 43 lots containing 30% or greater slopes, application #150716-15000S, based on the findings and subject to the conditions listed in the Staff Report dated March 9, 2016 and as modified by the conditions below:"

1. List any additional findings and conditions...

Sample Motion for a Negative Recommendation – "I move we deny the Hidden Canyon Estates Deviation to Build within a 30% or Greater Slope Area Request by Steve Maddox, representing Edge Homes for the purpose of approving development on 43 lots containing 30% or greater slopes, application #150716-15000S, based on the following findings:"

1. List any additional findings...



Development Review Committee

1020 East Pioneer Road
Draper, UT 84020
(801) 576-6539

STAFF REPORT

March 9, 2016

To: Draper City Planning Commission
Business Date: March 24, 2016

From: Development Review Committee

Prepared By: Jennifer Jastremsky, AICP, Planner III
Planning Division
Community Development Department

Re: Hidden Canyon Estates – Preliminary Subdivision Plat Request

Application No.: 150716-15000S
Applicant: Steve Maddox, representing Edge Homes
Project Location: Approximately 15000 South Suncrest Dr.
Zoning: RM (Multi-family Residential) and C-3 (Commercial) Zone
Acreage: Approximately 103 Acres (Approximately 4,486,680 ft²)
Request: Request for approval of a Preliminary Subdivision Plat in the RM and C-3 zones regarding a 300 lot single family development.

SUMMARY

This application is a request for approval of a Preliminary Subdivision Plat for approximately 103 acres located on the east side of Suncrest Dr., at approximately 15000 South Suncrest Dr. The property is currently zoned RM (Multi-family Residential) and C-3 (Commercial). The applicant is requesting that a Preliminary Subdivision Plat be approved to allow for the development of the currently vacant site as a single-family residential neighborhood.

BACKGROUND

The City entered into a Development Agreement with the property owner and Edge Homes on April 13, 2015. The agreement approved certain development conditions on the property, including an allowance for a maximum of 300 single-family dwelling units on lots of at least 7,500 square feet in size. It also requires any subdivision on the property to be a part of the Traverse Ridge Special Service District (TRSSD). Provisions for trails and a trail heads were also included in the agreement.

ANALYSIS

General Plan and Zoning. The Land Use Map of the General Plan calls for the Residential Hillside Low Density, Neighborhood Commercial and Open Space/Parks land use designations for the subject property.



The Residential Hillside Low Density category “includes areas of very large lot single-family neighborhoods or ranchettes as well as areas situated in the surrounding mountains and hillsides, as well as environmentally designed clustered housing.” The Neighborhood Commercial category “permits commercial land uses that target local residents and neighborhoods.” It also states that “medium and high density residential also is appropriate.” The Open Space/Parks category “encompasses the City’s established parks..and large..areas that have recreational potential and natural area open space.” The property has been assigned the RM (Multi-family Residential) and C-3 (Commercial) zoning classification. The RM zone supports up to 12 dwelling units per acre. The C-3 is an old commercial designation that supported general commercial uses. The RH and A5 zoning designations are identified by the General Plan as a preferred zoning classification for the Hillside Low Density Residential land use designation. The General Plan calls for the CN zone for the Neighborhood Commercial land use designations and the OS and A5 zones for the Open Space/Parks land use designation. The property is surrounded by the OS zone on the north, east and south. The MPC-Edelweiss zoning abuts on the west, along with the RM and C-3 zones. To the south is the RR-22 zoning district.

Subdivision Layout and Circulation. The subdivision will include nine phases. The applicant plans on developing the first eight phases, with the last Phase 9 being developed by the existing property owner. The Development Agreement limits the number of homes without a second access to 50. This means the applicant will be able to obtain building permits for lots within Phases 1-3 without the planned secondary access. After the secondary access is obtained, addition building permits may be approved. The applicant plans on applying for Final Plat for Phase 1 this year.

The main access into the development will be via Suncrest Drive, and more specifically the access road to the City’s regional detention basin. Roads will be public streets. A secondary access point will be from a future stub road into the Edelweiss Subdivision, which is currently under review with the City. There will be 300 single-family lots in total. Per the Development Agreement, each lot will have at least 7,500 square feet of area, with the largest lot being 90,090 square feet and the smallest lot being 7,766 square feet.

Street Design: The applicant is requesting approval of a street design modification. They are specifically requesting a 50-foot wide public right-of-way. The Draper City Master Transportation Plan calls for a minimum 56-foot wide right-of-way on mountain local roads. The difference between the two is the amount of asphalt, shoulder and curb and gutter provided. The City’s typical mountain local street standard calls for 24-feet of travel lane, with 4-feet of shoulder and 2-feet of curb and gutter per side of the street center line, along with a 5-foot side walk and 5-foot parkstrip on either side. The applicant is proposing 25-feet of travel lane, with 2.5-feet of curb and gutter per side of the street center line, and 5-foot sidewalk and 5-foot parkstrip on either side. The cross section for the proposed streets can be found in Exhibit K of this staff report.

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Staff has reviewed the request and is recommending approval of a 50-foot wide right-of-way. The proposed configuration will better match up with the design for Edelweiss than the City’s standard cross section. The single-family section of Edelweiss has been approved with a 46-foot wide right-of-way.

Hidden Canyon Estates has designed the stub road into Edelweiss to match their 46-foot wide street cross section.

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9-16-040: DEVELOPMENT REQUIREMENTS:

A. Development In General: Slope areas in excess of thirty percent (30%) may not be developed, and no more than thirty percent (30%) of a development's slope areas in excess of thirty percent (30%) may be included in the area calculation to determine density. The planning commission may modify this requirement upon finding that:

1. No significant harm will result;
2. The proposed modification will result in a more functional and improved plan; and
3. The developer/builder agrees to comply with any conditions or requirements imposed by the planning commission to mitigate any adverse effects which may result from the proposed modification.

City Staff and the City's geo-technical and geo-hazards consultants have reviewed the grading plans and determined that the proposed plans are not concerning in regards to slope.

Parks and Trails. The Development Agreement requires the developer to install trail and trailhead improvements or provide the City with \$500,000 to be used for trail and trailhead improvements. The developer has opted for the second choice, and a requirement to provide the \$500,000 with the first or second phase, as outlined in the Development Agreement, has been included as a condition of approval.

The applicant will be dedicating two parcels to the city with the plat. The first parcel will be dedicated with the Phase 1 Final Plat and include 13,928 square feet of open space area. This space can be used by the city to help with trail head improvements or other amenities along the trail ways. The second parcel will be dedicated with Phase 6 Final Plat and include 7,915 square feet of open space contiguous with the City's regional detention basin.

Lighting. The development will feature standard city residential street lights of 18-feet in height.

Fencing. Per the Development Agreement, the applicant will be providing a wrought iron fence along the shared property line of the subdivision and the City's open space. This will prevent future home owners from encroaching onto City property. The proposed design of the fence includes a 5-foot tall fence with exposed pickets at the top. The Parks and Recreation Department has requested that a different design be utilized that does not have exposed pickets. The concern is that large animals may get hurt or killed if they try to jump the fence. The fence line is next to wildlife corridors within the City's open space and the City has had problems with fence pickets and wildlife in the past. A condition of approval has been included requiring the fence design to be modified.

Criteria For Approval. The criteria for review and potential approval of a Preliminary Subdivision Plat request is found in Section 17-3-040(a) of the Draper City Municipal Code. This section depicts the standard of review for such requests as:

“The Planning Commission shall review the preliminary plat submittal and determine compliance with the standards and criteria set forth in this chapter and all other ordinances of Draper City, including but not limited to the Land Use Ordinance, General Plan, Master Street Plan, and City Standard Specifications and Design Criteria. Notice of the public meeting at which the Planning Commission reviews the proposed preliminary plat shall be provided in accordance with Section 17-1-085. The Planning Commission shall make findings specifying any inadequacy in the application, non-compliance with City regulations, questionable or undesirable design or engineering, and the need for any additional information. The Planning Commission may review all relevant information pertaining to the proposed development including fire protection, sufficient supply of culinary and secondary water to the proposed subdivision, sewer service, traffic considerations, and the potential for flooding. The Planning Commission shall submit its findings and recommendations regarding approval or disapproval of the preliminary plat to the City Council.”

REVIEWS

Planning Division Review. The Draper City Planning Division has completed their review of the Preliminary Subdivision Plat submission and has issued a recommendation for approval for the request with the following proposed conditions:

1. Change “limits of non-disturbance” areas to “non-build areas” in order to better reflect what is happening with the site grading. Please provide a note on the plat listing the restrictions of “non-build areas”.
2. A 50-foot wide street cross section be approved for the majority of the street system within Hidden Canyon Estates, with a 46-foot wide stub road into the Edelweiss development in order to match that developments street cross section.
3. Address all outstanding redlines in each phase prior to obtaining Final Plat approval.
4. Approval of a deviation to build within a slope greater than 30% is appropriate.
5. Submit two sets of 24” × 36” and two sets of 11” × 17” of final drawings for City records along with PDF version of the drawing sets.

Engineering and Public Works Divisions Review. The Draper City Engineering and Public Works Divisions have completed their reviews of the Preliminary Subdivision Plat submission and have issued a recommendation for approval for the request with the following proposed conditions:

1. The Parks and Recreation Department recommend against the wrought iron fence design proposed due to the wildlife corridors in the area and the threat to large animals (deer, elk, moose) potentially becoming impaled.
2. Applicant is proposing an alternate public street section rather than the existing adopted mountain local street standard. Applicant proposes a 50-foot right-of-way versus the standard 56-foot. We recommend council grant this request because it is similar to the existing street sections within SunCrest Development.
3. Provide acceptance of proposed property layout in the area of lots 298-300 +/- from the holder of the conservation easement for Corner Canyon. Based on their acceptance, the staff recommends city council accept the information and documentation provided by the applicant to resolve the difference in parcel boundaries as it relates to the location of the Salt Lake County and Utah County line.
4. All construction activities shall remain within subdivision property without impacting open space outside subdivision limits. Construction methodology should be considered in subdivision design.

5. No channelized or concentrated storm water runoff shall be permitted onto city open space, such as a roof drain or area drain.
6. Any all grading requires a “Final” grading plan approved by the city as part of the final subdivision approval process. Preliminary grading plans are not sufficient to begin earthwork construction activities onsite. Final approval is required and is separate from the preliminary subdivision approval.
7. The maximum number of single family detached units on a single point of entry is 50. No additional phasing or units shall be permitted until a second access is constructed from the subdivision to a public right-of-way meeting the city’s and Unified Fire Authority’s requirements.
8. Phasing lines do not comply with Draper City Municipal Code in that through the first four phases there is no second access but the maximum number of single family residences is exceeded for a single point of entry. Phase line(s) shall cover the second access street by/in the phase where 50 units are reached. It shall be constructed prior to entitling 51st unit. After phases 1 and 2 a total of 46 units are entitled. Second access shall be a part of Phase 3. If phasing lines are not changed, building permits will not be issued in excess of 50 lots until the second access is provided.
9. Limits of disturbance boundary cross outside subdivision boundary and onto city property. No construction outside of private property is allowed permission and easement(s) if necessary. At the present time no permission is given. Phase 8 will require additional grading easement / permission around lots 814-818 at the time Phase 8 is submitted for final approval.
10. Final city approved geotechnical and geohazard reports are required. All the recommendations shall be incorporated into the preliminary subdivision design.
11. Natural Resource Inventory (NRI) requires that one who is qualified make the determinations of the items and categories listed in the Draper City Municipal Code. Verify individual making the claim has the expertise and qualifications to make the determinations. This subdivision could potentially have significant public scrutiny with public opinion as to how well the ordinances are satisfied.
12. The determination of whether or not existing wetlands exist onsite shall be made by a competent professional.
13. The existing right-of-way (ROW) dedication of June 4, 2014 in the area of Phases 6, 8, and 9 shall be modified and updated to the proposed new alignment prior to the construction of any infrastructure within the area, including the proposed street across the dam embankment.
14. Identify the slope protection swells and cutoff swells are private and shall be privately maintained. Swells required by the subdivision shall be protected by an easement and dedicated.
15. Add any drainage easement for swells crossing lots, as required by the drainage and grading plan. Minimum easement width shall be 10 feet. Identify main swell channels, collection points, and connection to SD system to ensure proper drainage.
16. Missing drainage easement on lot 416 or 208 & 110.
17. Missing text identifying drainage and access easement on lots 916 & 917.
18. Change the “LIMITS OF NON-DISTRUBANCE” line shown on the plat to a “NON-BUILD AREA” in order to better reflect its purpose? This area is disturbed by mass grading operations and therefore is already disturbed. Add note to indicate the non-build area limitations and restrictions.
19. Hatch each easement type with a separate hatch pattern, such as slope, storm drainage, etc. Hatching density does not have to be high but to show the easement area.
20. WaterPro will not be signing plat. Draper City provides drinking water to this area. Remove signature block for final plat submittal for Phase 1.

21. Geotechnical report was amended with a resubmittal around March 2, 2016 which had some additional restrictions, keyway and benching requirements, and deep fill drainage pipeline requirements – three separate areas. Add to grading and drainage plan.
22. All areas that are to be impacted by earthwork shall be included in the phase in which they will be necessary. For Phase 1, include all areas where utility work is required, where stockpiles will be placed, where cut material will be placed, etc. Work may only occur in areas associated with “Final” approval. Preliminary approval is not adequate to issue a Land Disturbance Permit.
23. Add slope protection swells and cutoff swells. Swells required by the subdivision shall be private and protected by an easement and dedicated. Draper City Municipal Code requires runoff be directed away from cut and fill slopes to prevent erosion. Provide information on how the slope faces are to be protected. Temporary erosion protection methods provided, i.e. coconut mat. However how will the slope be protected on a permanent basis.
24. Drainage Design Criteria requires access be provided to all structures including control structures, manholes, and junctions. Inlet and outlet to offsite flow passing through the site require access. No fences or permanent structures will be allowed in easement. 12-foot wide roadway will be required within the minimum 20 foot easement. This will be required at lots 915 & 916 and 925 & 926.
25. Channel protection and erosion prevention along lot line of lot 318 is required. Minimum width of easement is 20 feet. No fences will be allowed in easement.
26. Site is missing wall protection from runoff and saturation at lots 814-818.
27. No offsite drainage discharge between lots 926 & 927? Discharge has been removed from utility drawings.
28. Approval from third party geotechnical review is still required for the proposed retention basin on the top of the fill slopes as shown in the rear lot retention basin detail on sheet C303.
29. Preliminary approval does not permit or approval the shown retaining walls.
30. At the intersection of Suncrest Drive and Hidden Canyon Road, the latter shall have right and left turn lanes from the subdivision. A single entry lane is acceptable. Increase asphalt width to 44 feet; three 12-foot lanes and two four-foot shoulders. Final intersection design may come with Final Phase 1 drawings.
31. Add sight triangles to Suncrest Drive intersection sheet. In final plat submission limitations of landscaping and no fence will be placed on lot 127.
32. All intersections are to have a maximum slope of four percent per Draper City standards.
33. Draper City standard K values for vertical curves are 30 for crests and 40 for sags based on 30 mile an hour design speed. Reduction in K value will require a lower posted speed limit. Design speed is required to be five miles per hour over posted speed limit.
34. Note 37 does not comply with the requirements of the geotechnical report where all areas of cut and fill are to have the top soil and biologic matter removed.
35. Note 42 is confusing on when the requirement of removing six-inch rock from the utility trenches. The city has standards for its water and storm drainage pipes. South Valley Sewer has their standard. And the geotechnical report limits it to two inches.
36. Retaining wall drainage pipelines were not shown for proposed retaining wall in lots 814-819 as shown for other retaining walls. Include pipeline alignment and discharge point.
37. Curb, gutter, and sidewalk lines have been removed from Phase 2. Restore.

Building Division Review. The Draper City Building Division has completed their review of the Preliminary Subdivision Plat submission and has issued a recommendation for approval for the request with the following proposed conditions:

1. Approval is conditional on the approval of the geologic hazards review process.

Geotechnical and Geologic Hazards Review. Taylor Geo-Engineering, LLC and Simon Associates LLC., in working with the Draper City Building and Engineering Divisions, are currently conducting their reviews of the geotechnical and geologic hazards report submitted as a part of the Preliminary Subdivision Plat submission. As the reports are not yet finalized, they have yet to make a final recommendation. A list of requirements in the latest submittal can be found below. These requirements have also been included as conditions of approval. The actual reviews by both consultants can be found in Exhibit J of this report.

Taylor Geo-Engineering, LLC Comments:

1. Based on the requirements of the Draper City Geologic Hazard Ordinance, and the information presented in the subject documents, TG recommends Draper City not consider IGES geotechnical submittals complete from a geotechnical perspective until IGES adequately addresses Comment No. 7 in the February 8, 2016, TG letter.
2. TG recommends Draper City request IGES clarify why, in the February 26, 2016, IGES response letter, IGES acknowledged review of bedrock cut slopes greater than 10 feet in height will be performed by both a qualified engineering geologist and a qualified geotechnical engineer, and the apparent change in the March 14, 2016, IGES Addendums to Geotechnical & Geological Hazard Investigation, where IGES proposes review of bedrock cut slopes greater than 10 feet high, made by either a qualified engineering geologist *and/or* a qualified geotechnical engineer.
3. TG recommends Draper City require review of bedrock cut slopes greater than 10 feet high be made by a qualified engineering geologist *and* a qualified geotechnical engineer.
4. TG recommends Draper City require review of bedrock cut slopes greater than 10 feet high be based on *quantitative* data collected by a qualified engineering geologist and a qualified geotechnical engineer and not *qualitative judgment* from observations made by a qualified engineering geologist and a qualified geotechnical engineer.
- a. Recording of geologic structural data such as orientation (strike) and inclination (dip) of bedding planes, faults, joints, fractures, etc., and;
- b. Annotated photographic documentation of each bedrock cut slopes greater than 10 feet high or a geologic log of each bedrock cut slope greater than 10 feet high. Photographic annotation or geologic logs should contain, at a minimum, aerial distribution of geologic units exposed in cut slopes and the geologic structural data recommended in the preceding item.
5. TG recommends Draper City require the Applicant submit the geologic and geotechnical documentation of cut slopes greater than 10 feet high in a letter report at the completion of grading.
6. On March 17, 2016, Simon Associates, LLC, (SA), submitted to Draper City a geological review of the following document:

IGES, Second Review Response – Geology, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated February 3, 2016, prepared for Wasatch Land Company, LLC, PO Box 216, Orem, Utah 84059.

TG recommends, prior to project approval, Draper City require IGES respond to the March 17, 2016, SA letter.

7. In response to Item 11 of the TG February 8, 2016 review letter, IGES stated the “*the applicant is currently addressing the wetlands issue.*” Prior to plan approval, TG recommends the applicant submit the findings of the wetlands evaluation “*including the*

legal circumstances surrounding development on or adjacent to wetlands areas” (recommendation by IGES in the September 23, 2015 report). TG understands that additional review comments by the applicant to this item will be addressed by the Draper City Engineering Department.

8. This letter constitutes the third geotechnical review letter. In order to clarify remaining issues, TG recommends Draper City consider a project meeting with the Applicant and Consultant (prior to the Consultant submitting a response letter), to discuss the geotechnical issues presented herein.

Simon Associates LLC Comments:

1. Comment No. 1a in the January 21, 2016, SA letter (SA, 2016a) states:

“Re-evaluate whether the fault in question is truly associated with the Wasatch fault zone and therefore Holocene-age as defined in the Draper City geologic hazard ordinance (Draper City, 2010). Review of Biek (2005b), may prove beneficial.”

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 1a:

“IGES has reviewed the recommended Biek (2005b) publication, and still concludes that the fault in question is associated with the Wasatch Fault Zone and therefore Holocene-age.”

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 1a:

SA recommends Draper City request IGES:

- a. *Provide adequate data to support IGES’ conclusion that the fault in question is associated with the Wasatch Fault Zone.*
- b. *Review the geologic hazard investigations for the proposed Edelweiss subdivision (provided to IGES by SA on March 10, 2016 via email) for data regarding the age of the fault in question. The fault in question also crosses the proposed Edelweiss subdivision (see attached map from Biek, 2005a), where the fault was trenched in two locations and concluded to be pre-Holocene-age. SA is not stipulating or intentional implying a preferred age for the fault in question. The age of the fault in question should be determined by IGES.*

Do to potential unintentional consequences (i.e., impacts on other subdivisions, etc.), it is SA’s opinion that great care should be taken and sufficient data obtained, prior to assigning a Holocene-age to any fault, and in particular the fault in question.

2. Comment No. 1b in the January 21, 2016, SA letter (SA, 2016a) states:

“Provide a map depicting the location of the fault to the west and outside of the Hidden Canyon Estates property where there is a noted topographic change and the location of the “Geomorphic expression of the fault scarp may be present on the western side of Suncrest Drive at this location, and therefore outside of the Hidden Canyon Estates property.”

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 1b:

“See the attached Figure R-1a through R-1d, which identify the suspected fault scarp and project the approximate location of the fault to the west of the Hidden Canyon Estates property. Corresponding explanatory text was provided in the January 4, 2016 IGES response letter (see page 4, the last bullet in the Response to Comment No. 4b(i)). The closest the fault passes to the property with this interpretation of the data is approximately 80 feet, as the fault crosses from the western to eastern side of Suncrest Drive in the southwestern portion of the property near the location of where Trench-1 was excavated.”

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 1b:

- a. IGES did not provide the requested map depicting the location of the fault to the west and outside of the Hidden Canyon Estates property. *SA recommends Draper City request IGES provide the requested map, which was also discussed at the January 29, 2016, project meeting (SA, 2016b). A 1:24,000 scale base map will be sufficient.*

Pre-development 1951, 1969, 1975, 1994, and 1998, 7.5 minute USGS quadrangles are available from the USGS at:

<http://geonames.usgs.gov/apex/f?p=262:1:11057143890498>.

- b. In regards to the location of the fault, the February 3, 2016, IGES letter (IGES, 2016a) refers to a “suspected fault scarp” and IGES has “project[ed] the approximate location of the fault to the west of the Hidden Canyon Estates property.”

Do to potential unintentional consequences (i.e., impacts on other subdivisions, etc.), it is SA’s opinion that great care should be taken and sufficient data obtained, if IGES is going to propose a location for the fault that differs from the location depicted by Biek (2005a). The use of “suspected,” “projected,” and “approximate,” by definition, indicates doubt, uncertainty, and conjecture. *SA recommends Draper City not accept conclusions based on doubt, uncertainty, and conjecture and request IGES provide definitive data to support the location of the fault in question.*

- c. Figures R-1a through R-1d in the February 3, 2016, IGES letter (IGES, 2016a) appear to be sequential and from 1993 Google Earth historical image. *SA recommends Draper City request IGES provide an index map for the four figures.*
- d. IGES might find it pertinent that historical Google Earth images, when viewed obliquely, do not reflect historical topography; topography is current with the historical Google Earth image draped over the current topography. *SA recommends Draper City request IGES:*
 - i. *Indicate whether or not the location of the “suspected fault scarp” depicted on Figures R-1a through R-1d in the February 3, 2016, IGES letter (IGES, 2016a), was based on analysis of stereo-paired aerial photographs and not only Google Earth imagery.*
 - ii. *Confirm the “scarp” depicted on Figures R-1a through R-1d is not a road cut for Suncrest Drive.*

3. Comment No. 1c in the January 21, 2016, SA letter (SA, 2016a) states:

“Re-consider the location of the fault as shown on Plate A-2, considering IGES did not document the presence of a fault in Trench-1. IGES indicates the location of the fault as shown on Plate A-2 is the location by Biek (2005a). Plate A-2 should reflect the findings of the IGES investigation.”

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 1c:

“See the attached updated Plate A-2.”

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 1c:

IGES updated Plate A-2 depicts the fault about 80 feet to the west of the southern part of the Property. Based on data presented by IGES and the Draper City Geologic Hazard Ordinance, it is SA’s opinion insufficient data has been provided to substantiate IGES’ conclusion that “The closest the fault passes to the property with this interpretation of the data is approximately 80 feet, as the fault crosses from the western to eastern side of Suncrest Drive in the southwestern portion of the property near the location of where Trench-1 was excavated.”

SA recommends Draper City request IGES provide adequate data to support their conclusion that the fault is located about 80 feet west of the Property.

4. Comment No. 2 in the January 21, 2016, SA letter (SA, 2016a) states:

“For clarification, it is SA’s opinion that the “headscarps” require further investigation. SA discussions included mention that all geologic features that could pose a hazard had to be investigated. Three of the headscarps, in our opinion, do not appear to be related to IGES’ reference to McCalpin (2004) [2004b] landslide RRS #18.”

“Based on our evaluation, it does not appear IGES has any trenches that cross the headscarps or “... test pits excavated in these areas of the Hidden Canyon Estates property...”

“SA recommends Draper City request IGES provide appropriate data for whether or not the headscarps are present and if so, the ramifications of the headscarps and associated landslides in light of proposed development. It is important to note that proposed development may change “... the present climatic regime ...” by modifications to topography (i.e., grading) and climatic conditions (i.e., introduction of landscape irrigation).”

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 2:

“IGES takes note that the proposed development may alter the stability of relict landslides, given a change in topography by grading and climatic conditions by way of irrigation. However, though McCalpin (2004) displays four “relict headscarps” on the Hidden Canyon Estates property and these were duly noted by IGES (see the first paragraph on Page 9 of the September 23, 2015 IGES

report), IGES did not determine these to be headscarps. Aerial photograph (see IGES, 2015), LiDAR, and Google Earth imagery reviewed for this investigation did not display evidence of headscarps in these areas, and subsequent fieldwork (including both site reconnaissance and subsurface investigations) also did not provide confirmatory evidence of the features being headscarps. From east to west, the vicinity of the four McCalpin relict headscarps were examined by way of TP-19, TP-20, TP-13, and TP-10, respectively (see IGES Figure R-2, attached). None of these test pits exhibited shear planes, buried soil horizons, jumbled soil structure, or other evidence for the presence of a landslide headscarp or associated landslide deposits.”

“Given the absence of headscarp evidence and/or associated landslide deposits in these areas, and the presence alluvial, fluvial, and colluvial deposits in these areas, it is thus concluded by IGES that these features are erosional in nature.”

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 2:

Test pits TP-10, TP-13, and TP-19, (see IGES Figure R-2, attached), are not located within the suspect features and TP-20 is depicted at the edge of one of the features. During the geologic field reviews:

- a. Prior to observing each test pit, SA (and Taylor Geotechnical) asked Mr. Payton and/or Mr. Doumit the purpose of each test pit.
- b. IGES never mentioned that TP-10, TP-13, TP-19, and TP-20 were located to evaluate the McCalpin (2004) headscarps.
- c. IGES indicated the four test pits were located for geotechnical analyses.

Because the referenced test pits are not located within the headscarp features, it is our opinion that sufficient data has not been provided to substantiate IGES’ conclusion that the “... features are erosional in nature.” *SA recommends:*

- a. *Draper City request IGES provide additional data to substantiate IGES’ conclusion that the “... features are erosional in nature.”.*
 - b. *Draper City require a scoping meeting (should IGES choose to perform additional field exploration) prior to commence of any field work, as stipulated in the Draper City geologic hazard ordinance.*
5. *SA recommends Draper City request IGES provide adequate data to support the retraction of any statements in prior IGES reports/letters.*
 6. This letter constitutes the third review letter. In order to clarify remaining issues, *SA recommends Draper City schedule a project meeting with the Applicant and Consultant (prior to the Consultant submitting a response letter), to discuss the geologic issues presented herein.*

Unified Fire Authority Review. The Unified Fire Authority has completed their review of the Preliminary Subdivision Plat submission and has issued a recommendation for approval for the request with the

following proposed conditions:

1. Fire Department Access is required. An unobstructed minimum road width of thirty-six (36) feet (Draper Mountain Local Street Cross section) and a minimum height of thirteen (13) feet six (6) inches shall be required.
2. Fire Department Approved Turn Around Required. Access roads over 150 feet long shall require an approved turn around.
3. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads, and shall meet the requirements of Section D104.3. Exceptions:
 - a. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 of the International Fire Code, access from two directions shall not be required.
 - b. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.
4. Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.
5. Fire Hydrants are required. There shall be 34 hydrants required to be spaced at 500ft. increments. The required fire flow for this project is 2000GPM for full 2 hour duration.
6. Hydrants and Site Access. All hydrants and a form of acceptable temporary Fire Department Access to the site shall be installed and APPROVED by the Fire Department prior to the issuance of any Building Permits. If at any time during the building phase any of the hydrants or temporary Fire Department Access becomes non-compliant any and all permits could be revoked.
7. No combustible construction shall be allowed prior to hydrant installation and testing by water purveyor. All hydrants must be operational prior to any combustible elements being received or delivered on building site.
8. Residential Fire Sprinklers (NFPA 13D) with Fire Pumps Shall Be Required.
9. Street Signs required and are to be posted and legible prior to building permits being issued. All lots to have lot number or address posted and legible.
10. Visible Addressing Required. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.

Parks & Trails Committee Review. The Draper City Parks and Trails Committee has completed their review of the Preliminary Subdivision Plat submission and has requested the following proposed comments:

1. Address concerns with wild life corridor and hydrology up drainage to the east meadow area.
2. Provide road access to east of development for emergency access and maintenance.
3. Proposed with lots shown on north side of ridge overlooking corner canyon. Need to verify ownership.

South Valley Sewer District Review. The South Valley Sewer District is currently reviewing the application for service. A letter indicating their ability to serve the development has been included as a

condition of approval.

Noticing. The applicant has expressed his desire to obtain a Preliminary Subdivision Plat for the subject property and do so in a manner which is compliant with the City Code. As such, notice has been properly issued in the manner outlined in the City and State Codes.

STAFF RECOMMENDATION

Staff recommends approval of the request for a Preliminary Subdivision Plat, Street Design Modification and Deviation to build within a 30% or greater Slope by Steve Maddox, representing Edge Homes, application 150716-15000S, subject to the following conditions:

1. That all requirements of the Draper City Engineering and Public Works Divisions are satisfied throughout the development of the site and the construction of all buildings on the site, including:
 - a. Change the wrought iron fencing design to eliminate the exposed pickets at the top of the fence. There are wildlife corridors in the area and the proposed type of fencing can pose a threat to large animals, such as deer, elk, or moose, which may potentially become impaled on the pickets.
 - b. Obtain all necessary permits, such as land disturbance permits.
 - c. Applicant is proposing an alternate public street section rather than the existing adopted mountain local street standard. Applicant proposes a 50-foot right-of-way versus the standard 56-foot. We recommend council grant this request because it is similar to the existing street sections within SunCrest Development.
 - d. Provide acceptance of proposed property layout in the area of lots 298-300 +/- from the holder of the conservation easement for Corner Canyon. Based on their acceptance, the staff recommends city council accept the information and documentation provided by the applicant to resolve the difference in parcel boundaries as it relates to the location of the Salt Lake County and Utah County line.
 - e. All construction activities shall remain within subdivision property without impacting open space outside subdivision limits. Construction methodology should be considered in subdivision design.
 - f. No channelized or concentrated storm water runoff shall be permitted onto city open space, such as a roof drain or area drain.
 - g. Any all grading requires a "Final" grading plan approved by the city as part of the final subdivision approval process. Preliminary grading plans are not sufficient to begin earthwork construction activities onsite. Final approval is required and is separate from the preliminary subdivision approval.
 - h. The maximum number of single family detached units on a single point of entry is 50. No additional phasing or units shall be permitted until a second access is constructed from the subdivision to a public right-of-way meeting the city's and Unified Fire Authority's requirements.
 - i. Phasing lines do not comply with Draper City Municipal Code in that through the first four phases there is no second access but the maximum number of single family residences is exceeded for a single point of entry. Phase line(s) shall cover the second access street by/in the phase where 50 units are reached. It shall be constructed prior to entitling 51st unit. After phases 1 and 2 a total of 46 units are entitled. Second access shall be a part of Phase 3. If phasing lines are not changed, building permits will not be issued in excess of 50 lots until the second access is provided.

- j. Limits of disturbance boundary cross outside subdivision boundary and onto city property. No construction outside of private property is allowed permission and easement(s) if necessary. At the present time no permission is given. Phase 8 will require additional grading easement / permission around lots 814-818 at the time Phase 8 is submitted for final approval.
- k. Final city approved geotechnical and geohazard reports are required. All the recommendations shall be incorporated into the preliminary subdivision design.
- l. Natural Resource Inventory (NRI) requires that one who is qualified make the determinations of the items and categories listed in the Draper City Municipal Code. Verify individual making the claim has the expertise and qualifications to make the determinations. This subdivision could potentially have significant public scrutiny with public opinion as to how well the ordinances are satisfied.
- m. The determination of whether or not existing wetlands exist onsite shall be made by a competent professional.
- n. The existing right-of-way (ROW) dedication of June 4, 2014 in the area of Phases 6, 8, and 9 shall be modified and updated to the proposed new alignment prior to the construction of any infrastructure within the area, including the proposed street across the dam embankment.
- o. Identify the slope protection swells and cutoff swells are private and shall be privately maintained. Swells required by the subdivision shall be protected by an easement and dedicated.
- p. Add any drainage easement for swells crossing lots, as required by the drainage and grading plan. Minimum easement width shall be 10 feet. Identify main swell channels, collection points, and connection to SD system to ensure proper drainage.
- q. Missing drainage easement on lot 416 or 208 & 110.
- r. Missing text identifying drainage and access easement on lots 916 & 917.
- s. Change the "LIMITS OF NON-DISTRUBANCE" line shown on the plat to a "NON-BUILD AREA" in order to better reflect its purpose? This area is disturbed by mass grading operations and therefore is already disturbed. Add note to indicate the non-build area limitations and restrictions.
- t. Hatch each easement type with a separate hatch pattern, such as slope, storm drainage, etc. Hatching density does not have to be high but to show the easement area.
- u. WaterPro will not be signing plat. Draper City provides drinking water to this area. Remove signature block for final plat submittal for Phase 1.
- v. Geotechnical report was amended with a resubmittal around March 2, 2016 which had some additional restrictions, keyway and benching requirements, and deep fill drainage pipeline requirements – three separate areas. Add to grading and drainage plan.
- w. All areas that are to be impacted by earthwork shall be included in the phase in which they will be necessary. For Phase 1, include all areas where utility work is required, where stockpiles will be placed, where cut material will be placed, etc. Work may only occur in areas associated with "Final" approval. Preliminary approval is not adequate to issue a Land Disturbance Permit.
- x. Add slope protection swells and cutoff swells. Swells required by the subdivision shall be private and protected by an easement and dedicated. Draper City Municipal Code requires runoff be directed away from cut and fill slopes to prevent erosion. Provide information on how the slope faces are to be protected. Temporary erosion protection methods provided, i.e. coconut mat. However how will the slope be protected on a permanent basis.

- y. Drainage Design Criteria requires access be provided to all structures including control structures, manholes, and junctions. Inlet and outlet to offsite flow passing through the site require access. No fences or permanent structures will be allowed in easement. 12-foot wide roadway will be required within the minimum 20 foot easement. This will be required at lots 915 & 916 and 925 & 926.
 - z. Channel protection and erosion prevention along lot line of lot 318 is required. Minimum width of easement is 20 feet. No fences will be allowed in easement.
 - aa. Site is missing wall protection from runoff and saturation at lots 814-818.
 - bb. No offsite drainage discharge between lots 926 & 927? Discharge has been removed from utility drawings.
 - cc. Approval from third party geotechnical review is still required for the proposed retention basin on the top of the fill slopes as shown in the rear lot retention basin detail on sheet C303.
 - dd. Preliminary approval does not permit or approval the shown retaining walls.
 - ee. At the intersection of Suncrest Drive and Hidden Canyon Road, the latter shall have right and left turn lanes from the subdivision. A single entry lane is acceptable. Increase asphalt width to 44 feet; three 12-foot lanes and two four-foot shoulders. Final intersection design may come with Final Phase 1 drawings.
 - ff. Add sight triangles to Suncrest Drive intersection sheet. In final plat submission limitations of landscaping and no fence will be placed on lot 127.
 - gg. All intersections are to have a maximum slope of four percent per Draper City standards.
 - hh. Draper City standard K values for vertical curves are 30 for crests and 40 for sags based on 30 mile an hour design speed. Reduction in K value will require a lower posted speed limit. Design speed is required to be five miles per hour over posted speed limit.
 - ii. Note 37 does not comply with the requirements of the geotechnical report where all areas of cut and fill are to have the top soil and biologic matter removed.
 - jj. Note 42 is confusing on when the requirement of removing six-inch rock from the utility trenches. The city has standards for its water and storm drainage pipes. South Valley Sewer has their standard. And the geotechnical report limits it to two inches.
 - kk. Retaining wall drainage pipelines were not shown for proposed retaining wall in lots 814-819 as shown for other retaining walls. Include pipeline alignment and discharge point.
 - ll. Curb, gutter, and sidewalk lines have been removed from Phase 2. Restore.
2. That all requirements of the Draper City Building and Planning Divisions are satisfied throughout the development of the site and the construction of all buildings on the site, including permitting.
- a. Change “limits of non-disturbance” areas to “non-build areas” in order to better reflect what is happening with the site grading. Please provide a note on the plat listing the restrictions of “non-build areas”.
 - b. Address all outstanding redlines in each phase prior to obtaining Final Plat approval.
 - c. Approval of a deviation to build within a slope greater than 30% is appropriate.
 - d. Submit two sets of 24” × 36” and two sets of 11” × 17” of final drawings for City records along with PDF version of the drawing sets.
 - e. Approval is conditional on the approval of the geologic hazards review process.
3. That all requirements of the Unified Fire Authority are satisfied throughout the development of the site and the construction of all buildings on the site, including:
- c. Fire Department Access is required. An unobstructed minimum road width of thirty-six (36) feet (Draper Mountain Local Street Cross section) and a minimum height of thirteen (13) feet six (6) inches shall be required.

- d. Fire Department Approved Turn Around Required. Access roads over 150 feet long shall require an approved turn around.
 - e. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with two separate and approved fire apparatus access roads, and shall meet the requirements of Section D104.3. Exceptions:
 - i. Where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 of the International Fire Code, access from two directions shall not be required.
 - ii. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.
 - f. Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.
 - g. Fire Hydrants are required. There shall be 34 hydrants required to be spaced at 500ft. increments. The required fire flow for this project is 2000GPM for full 2 hour duration.
 - h. Hydrants and Site Access. All hydrants and a form of acceptable temporary Fire Department Access to the site shall be installed and APPROVED by the Fire Department prior to the issuance of any Building Permits. If at any time during the building phase any of the hydrants or temporary Fire Department Access becomes non-compliant any and all permits could be revoked.
 - i. No combustible construction shall be allowed prior to hydrant installation and testing by water purveyor. All hydrants must be operational prior to any combustible elements being received or delivered on building site.
 - j. Residential Fire Sprinklers (NFPA 13D) with Fire Pumps Shall Be Required.
 - k. Street Signs required and are to be posted and legible prior to building permits being issued. All lots to have lot number or address posted and legible.
 - l. Visible Addressing Required. New and existing buildings shall have approved address numbers plainly legible and visible from the street fronting the property. These numbers shall contrast with their background.
4. That all requirements of the geotechnical and geologic hazard reports are satisfied throughout the development of the site and the construction of all buildings on the site.
- a. Based on the requirements of the Draper City Geologic Hazard Ordinance, and the information presented in the subject documents, TG recommends Draper City not consider IGES geotechnical submittals complete from a geotechnical perspective until IGES adequately addresses Comment No. 7 in the February 8, 2106, TG letter.
 - b. TG recommends Draper City request IGES clarify why, in the February 26, 2016, IGES response letter, IGES acknowledged review of bedrock cut slopes greater than 10 feet in height will be performed by both a qualified engineering geologist and a qualified geotechnical engineer, and the apparent change in the March 14, 2016, IGES Addendums to Geotechnical & Geological Hazard Investigation, where IGES proposes review of bedrock cut slopes greater than 10 feet high, made by either a qualified engineering geologist and/or a qualified geotechnical engineer.
 - c. TG recommends Draper City require review of bedrock cut slopes greater than 10 feet high be made by a qualified engineering geologist and a qualified geotechnical engineer.

- d. TG recommends Draper City require review of bedrock cut slopes greater than 10 feet high be based on quantitative data collected by a qualified engineering geologist and a qualified geotechnical engineer and not qualitative judgment from observations made by a qualified engineering geologist and a qualified geotechnical engineer.
 - i. Recording of geologic structural data such as orientation (strike) and inclination (dip) of bedding planes, faults, joints, fractures, etc., and;
 - ii. Annotated photographic documentation of each bedrock cut slopes greater than 10 feet high or a geologic log of each bedrock cut slope greater than 10 feet high. Photographic annotation or geologic logs should contain, at a minimum, aerial distribution of geologic units exposed in cut slopes and the geologic structural data recommended in the preceding item.
- e. TG recommends Draper City require the Applicant submit the geologic and geotechnical documentation of cut slopes greater than 10 feet high in a letter report at the completion of grading.
- f. On March 17, 2016, Simon Associates, LLC, (SA), submitted to Draper City a geological review of the following document:

IGES, Second Review Response – Geology, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated February 3, 2016, prepared for Wasatch Land Company, LLC, PO Box 216, Orem, Utah 84059.

TG recommends, prior to project approval, Draper City require IGES respond to the March 17, 2016, SA letter.

- g. In response to Item 11 of the TG February 8, 2016 review letter, IGES stated the “the applicant is currently addressing the wetlands issue.” Prior to plan approval, TG recommends the applicant submit the findings of the wetlands evaluation “including the legal circumstances surrounding development on or adjacent to wetlands areas” (recommendation by IGES in the September 23, 2015 report). TG understands that additional review comments by the applicant to this item will be addressed by the Draper City Engineering Department.
- h. This letter constitutes the third geotechnical review letter. In order to clarify remaining issues, TG recommends Draper City consider a project meeting with the Applicant and Consultant (prior to the Consultant submitting a response letter), to discuss the geotechnical issues presented herein.
- i. Provide adequate data to support IGES’ conclusion that the fault in question is associated with the Wasatch Fault Zone.
- j. Review the geologic hazard investigations for the proposed Edelweiss subdivision (provided to IGES by SA on March 10, 2016 via email) for data regarding the age of the fault in question.
- k. IGES did not provide the requested map depicting the location of the fault to the west and outside of the Hidden Canyon Estates property. SA recommends Draper City request IGES provide the requested map, which was also discussed at the January 29, 2016, project meeting (SA, 2016b). A 1:24,000 scale base map will be sufficient.
- l. Do to potential unintentional consequences (i.e., impacts on other subdivisions, etc.), it is SA’s opinion that great care should be taken and sufficient data obtained, if IGES is going to propose a location for the fault that differs from the location depicted by Biek (2005a). The use of “suspected,” “projected, and “approximate,” by definition, indicates doubt, uncertainty, and conjecture. SA recommends Draper City not accept conclusions based on doubt, uncertainty, and conjecture and request IGES provide definitive data to support the location of the fault in question.

- m. Figures R-1a through R-1d in the February 3, 2016, IGES letter (IGES, 2016a) appear to be sequential and from 1993 Google Earth historical image. SA recommends Draper City request IGES provide an index map for the four figures.
- n. IGES might find it pertinent that historical Google Earth images, when viewed obliquely, do not reflect historical topography; topography is current with the historical Google Earth image draped over the current topography. SA recommends Draper City request IGES:
 - a. Indicate whether or not the location of the “suspected fault scarp” depicted on Figures R-1a through R-1d in the February 3, 2016, IGES letter (IGES, 2016a), was based on analysis of stereo-paired aerial photographs and not only Google Earth imagery.
 - b. Confirm the “scarp” depicted on Figures R-1a through R-1d is not a road cut for Suncrest Drive.
- o. SA recommends Draper City request IGES provide adequate data to support their conclusion that the fault is located about 80 feet west of the Property.
- p. Because the referenced test pits are not located within the headscarp features, it is our opinion that sufficient data has not been provided to substantiate IGES’ conclusion that the “... features are erosional in nature.” SA recommends:
 - c. Draper City request IGES provide additional data to substantiate IGES’ conclusion that the “... features are erosional in nature.”
 - d. Draper City require a scoping meeting (should IGES choose to perform additional field exploration) prior to commence of any field work, as stipulated in the Draper City geologic hazard ordinance.
- q. SA recommends Draper City request IGES provide adequate data to support the retraction of any statements in prior IGES reports/letters.
- r. This letter constitutes the third review letter. In order to clarify remaining issues, SA recommends Draper City schedule a project meeting with the Applicant and Consultant (prior to the Consultant submitting a response letter), to discuss the geologic issues presented herein.
- 5. Complete all necessary paperwork and notices, if any, for subdivision inclusion into the Traverse Ridge Special Service District (TRSSD).
- 6. Provide the City with \$500,000 prior to the final approval of the second phase. The money shall be used for the construction of trails and trailheads, as outlined within the Development Agreement. Conversely, the developer may choose to install \$500,000 worth of trails and trailhead improvements within the first or second phase of the development, as allowed by the Development Agreement. If this second option is utilized, please provide details of proposed improvements with Final Subdivision Plat application for staff review.
- 7. Please provide a will serve letter from South Valley Sewer District.
- 8. Verify property ownership lines in relationship to the north property line and county line within Phase 9. If necessary, adjust the subdivision plat boundary lines.

This recommendation is based on the following findings:

- 1. The proposed development plans meet the intent, goals, and objectives of the Draper City General Plan.
 - a. The Residential Hillside Low Density Land Use Category includes areas of very large lot single-family neighborhoods or ranchettes as well as areas situated in the surrounding mountains and hillsides, as well as environmentally designed clustered housing.
 - b. The Neighborhood Commercial Land Use Category states that medium and high

- density residential is also appropriate in addition to commercial land uses.
- c. The Open Space/Parks Land Use Category encompasses established parks, large areas of recreational potential and natural open space areas. This development will provide funds for additional trail and trailhead improvements within the City's extensive open space system in the vicinity of the proposed development.
 2. The proposed development plans meet the requirements and provisions of the Draper City Municipal Code.
 3. The proposed development plans will not be deleterious to the health, safety, and general welfare of the general public nor the residents of adjacent properties.
 4. The proposed development conforms to the general aesthetic and physical development of the area.
 5. The public services in the area are adequate to support the subject development.
 6. The proposed development plans meet the requirements found within the Development Agreement between the City, property owner, and applicant.

MODEL MOTIONS

Preliminary Subdivision Plat:

Sample Motion for a Positive Recommendation – “I move we forward a positive recommendation to the City Council for the Hidden Canyon Estates Preliminary Subdivision Plat Request by Steve Maddox, representing Edge Homes for the purpose of creating a 300 lot single-family subdivision, application #150716-15000S, based on the findings and subject to the conditions listed in the Staff Report dated March 9, 2016 and as modified by the conditions below:”

1. List any additional findings and conditions...

Sample Motion for a Negative Recommendation – “I move we forward a negative recommendation to the City Council for the Hidden Canyon Estates Preliminary Subdivision Plat Request by Steve Maddox, representing Edge Homes for the purpose of creating a 300 lot single-family subdivision, application #150716-15000S, based on the following findings:”

1. List any additional findings...

Street Design Modification:

Sample Motion for a Positive Recommendation – “I move we forward a positive recommendation to the City Council for the Hidden Canyon Estates Street Design Modification Request by Steve Maddox, representing Edge Homes for the purpose of approving a 50-foot wide right-of-way, application #150716-15000S, based on the findings and subject to the conditions listed in the Staff Report dated March 9, 2016 and as modified by the conditions below:”

1. List any additional findings and conditions...

Sample Motion for a Negative Recommendation – “I move we forward a negative recommendation to the City Council for the Hidden Canyon Estates Street Design Modification Request by Steve Maddox, representing Edge Homes for the purpose of approving a 50-foot wide right-of-way, application #150716-15000S, based on the following findings:”

1. List any additional findings...

Deviation to Build within a 30% or Greater Slope Area:

Sample Motion for a Positive Recommendation – ““I move we approve the Hidden Canyon Estates Deviation to Build within a 30% or Greater Slope Area Request by Steve Maddox, representing Edge Homes for the purpose of approving development on 43 lots containing 30% or greater slopes, application #150716-15000S, based on the findings and subject to the conditions listed in the Staff Report dated March 9, 2016 and as modified by the conditions below:”

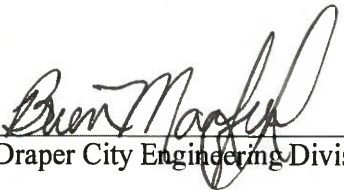
1. List any additional findings and conditions...

Sample Motion for a Negative Recommendation – “I move we deny the Hidden Canyon Estates Deviation to Build within a 30% or Greater Slope Area Request by Steve Maddox, representing Edge Homes for the purpose of approving development on 43 lots containing 30% or greater slopes, application #150716-15000S, based on the following findings:”

1. List any additional findings...

DEVELOPMENT REVIEW COMMITTEE ACKNOWLEDGEMENT

We, the undersigned, as duly appointed members of the Draper City Development Review Committee, do acknowledge that the application which provides the subject for this staff report has been reviewed by the Committee and has been found to be appropriate for review by the Draper City Planning Commission and/or City Council.



Draper City Engineering Division




Draper City Operations Division



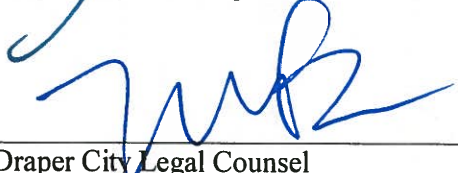
Unified Fire Authority



Draper City Building Division

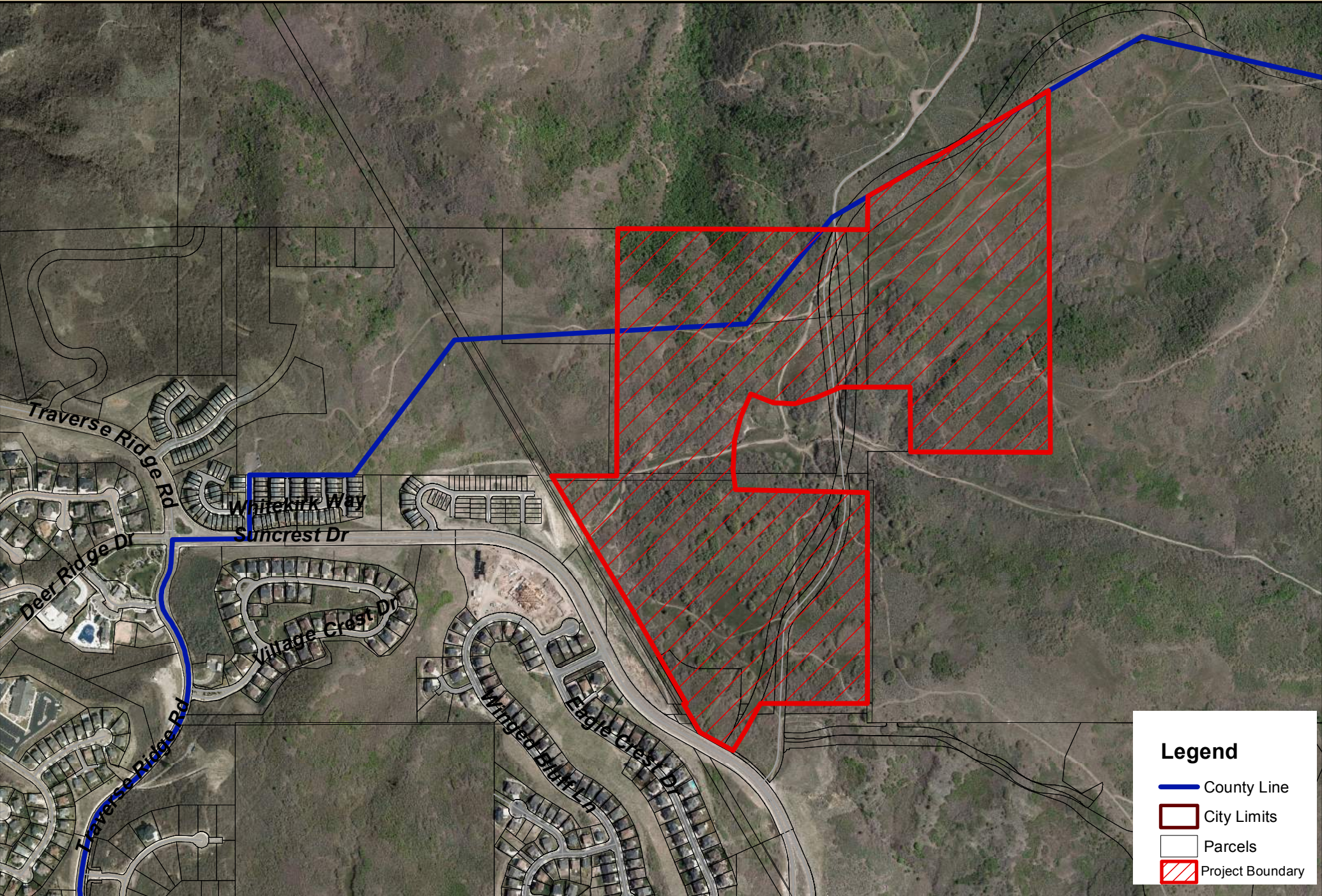


Draper City Planning Division



Draper City Legal Counsel

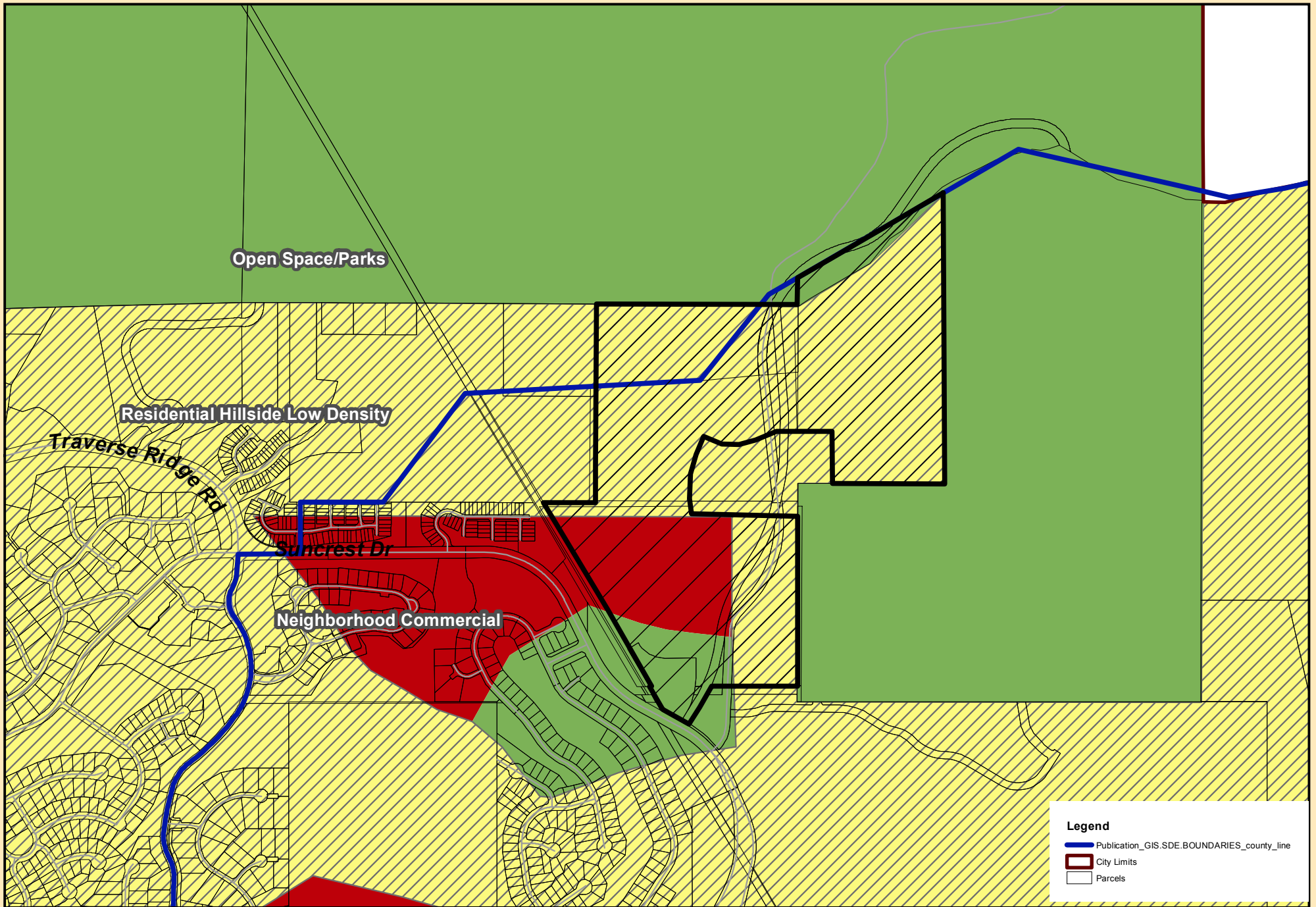
EXHIBIT A
AERIAL MAP



Legend

- County Line
- City Limits
- Parcels
- Project Boundary

EXHIBIT B
LAND USE MAP



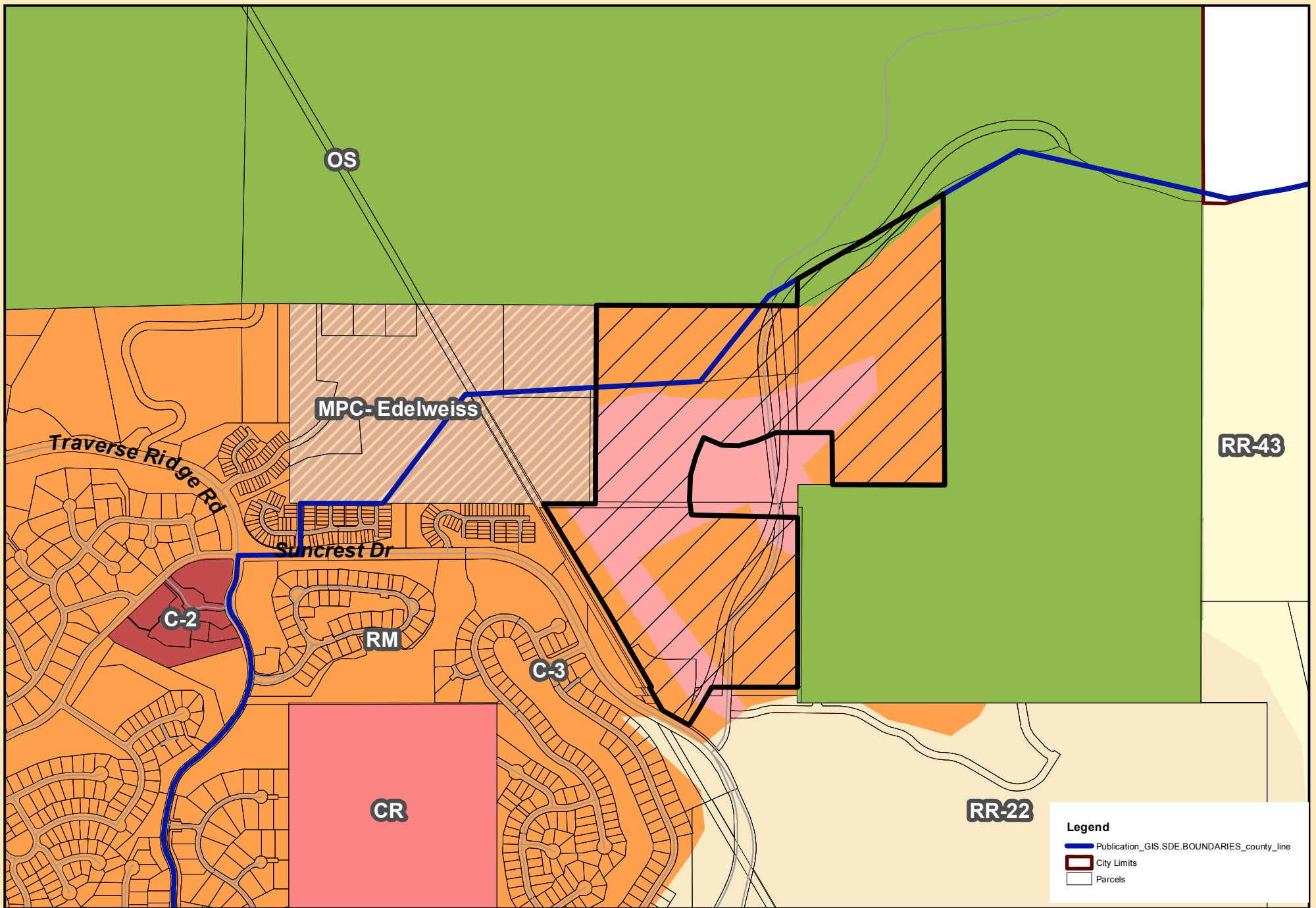
0 490 980 1,960
Feet

Note: Approximate Location

Hidden Canyon Estates Land Use Map



EXHIBIT C
ZONING MAP



0 490 980 1,960
Feet

Note: Approximate Location

Hidden Canyon Estates Zoning Map

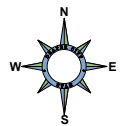
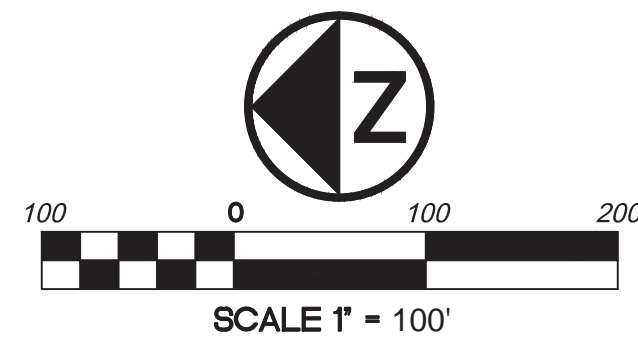


EXHIBIT D
PRELIMINARY PLAT

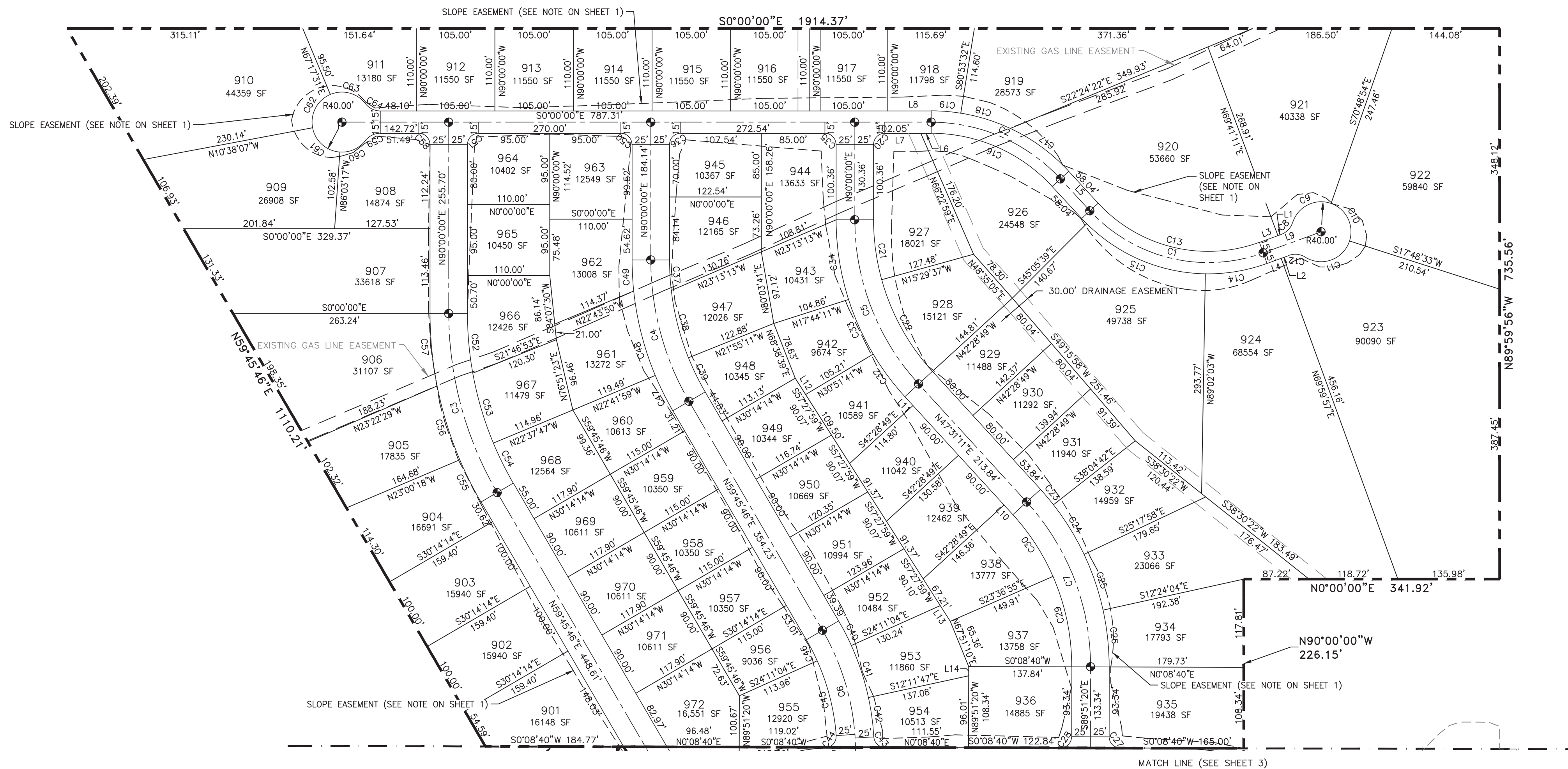
HIDDEN CANYON ESTATES

PRELIMINARY PLAT SHEET 2 OF 5



PLOT DATE: Mar 08, 2016

Curve Table					
Curve #	Radius	Length	Delta	Chord Bearing	Chord Distance
C1	215.00	252.63'	067°19'23"	S13° 39' 39"W	238.34'
C2	235.00	194.09'	047°19'20"	S23° 39' 40"W	188.62'
C3	475.00	250.68'	030°14'14"	N74° 52' 53"E	247.78'
C4	375.00	197.90'	030°14'14"	N74° 52' 53"E	195.61'
C5	325.00	240.96'	042°28'49"	N68° 45' 35"E	235.48'
C6	325.00	172.34'	030°22'54"	N74° 57' 13"E	170.32'
C7	325.00	241.78'	042°37'29"	N68° 49' 55"E	236.24'
C8	25.00	22.70'	052°01'12"	S46° 00' 39"E	21.93'
C9	40.00	63.67'	091°12'21"	S26° 25' 05"E	57.16'
C10	40.00	61.87'	088°37'27"	S63° 29' 50"W	55.89'
C11	40.00	72.75'	104°12'37"	N20° 05' 09"W	63.13'
C12	25.00	22.70'	052°01'12"	N06° 00' 34"E	21.93'
C13	200.00	235.00'	067°19'23"	S13° 39' 39"W	221.71'
C14	230.00	84.17'	020°58'00"	N09° 31' 03"W	83.70'
C15	230.00	176.39'	043°56'24"	N22° 56' 09"E	172.10'
C16	220.00	181.70'	047°19'20"	N23° 39' 40"E	176.58'
C17	250.00	97.50'	022°20'42"	N36° 08' 59"E	96.88'
C18	250.00	69.24'	015°52'10"	N17° 02' 33"E	69.02'
C19	250.00	39.74'	009°06'28"	N04° 33' 14"E	39.70'
C20	15.00	23.56'	090°00'00"	N45° 00' 00"W	21.21'
C21	300.00	81.13'	015°29'37"	S82° 15' 11"W	80.88'
C22	300.00	141.30'	026°59'12"	S61° 00' 47"W	140.00'
C23	350.00	26.89'	004°24'07"	S49° 43' 14"W	26.88'
C24	350.00	78.06'	012°46'44"	S58° 18' 40"W	77.90'
C25	350.00	78.79'	012°53'54"	S71° 08' 59"W	78.63'
C26	350.00	76.64'	012°32'44"	S83° 52' 18"W	76.48'
C27	15.00	23.56'	090°00'00"	S45° 08' 40"W	21.21'
C28	15.00	23.56'	090°00'00"	S44° 51' 20"E	21.21'
C29	300.00	124.41'	023°45'35"	N78° 15' 52"E	123.52'
C30	300.00	98.78'	018°51'54"	N56° 57' 08"E	98.33'
C32	350.00	70.98'	011°37'08"	N53° 19' 45"E	70.85'
C33	350.00	80.18'	013°07'31"	N65° 42' 04"E	80.00'
C34	350.00	108.34'	017°44'11"	N81° 07' 55"E	107.91'
C35	15.00	23.56'	090°00'00"	N45° 00' 00"W	21.21'
C36	15.00	23.56'	090°00'00"	N45° 00' 00"W	21.21'
C37	350.00	40.77'	006°40'25"	S86° 39' 47"W	40.74'
C38	350.00	93.13'	015°14'46"	S75° 42' 12"W	92.86'
C39	350.00	50.81'	008°19'03"	S63° 55' 17"W	50.76'
C40	350.00	36.97'	006°03'10"	S62° 47' 21"W	36.96'
C41	350.00	73.23'	011°59'17"	S71° 48' 35"W	73.10'
C42	350.00	53.23'	008°42'48"	S82° 09' 37"W	53.18'
C43	15.00	22.61'	086°22'21"	S43° 19' 51"W	20.53'
C44	15.00	20.26'	077°23'27"	S55° 40' 25"E	18.76'
C45	300.00	103.75'	019°48'55"	N75° 43' 23"E	103.24'
C46	300.00	31.69'	006°03'10"	N62° 47' 21"E	31.68'
C47	400.00	52.62'	007°32'15"	N63° 31' 53"E	52.58'
C48	400.00	116.94'	016°45'02"	N75° 40' 32"E	116.53'
C49	400.00	41.53'	005°56'56"	N87° 01' 32"E	41.51'
C50	15.00	23.56'	090°00'00"	N45° 00' 00"E	21.21'
C51	15.00	23.56'	090°00'00"	N45° 00' 00"W	21.21'
C52	450.00	80.05'	010°11'32"	S84° 54' 14"W	79.94'
C53	450.00	97.68'	012°26'15"	S73° 35' 20"W	97.49'
C54	450.00	59.75'	007°36'27"	S63° 33' 59"W	59.71'
C55	500.00	63.11'	007°13'56"	S63° 22' 44"W	63.07'
C56	500.00	103.46'	011°51'19"	S72° 55' 21"W	103.27'
C57	500.00	97.30'	011°08'59"	S84° 25' 31"W	97.15'
C58	15.00	23.56'	090°00'00"	S45° 00' 00"W	21.21'
C59	25.00	22.70'	052°01'12"	N26° 00' 36"W	21.93'
C60	40.00	39.07'	055°57'56"	N24° 02' 15"W	37.54'
C61	40.00	52.65'	075°25'10"	N41° 39' 18"E	48.93'
C62	40.00	54.40'	077°55'38"	S61° 40' 18"E	50.31'
C63	40.00	52.17'	074°43'41"	S14° 39' 22"W	48.55'
C64	25.00	22.70'	052°01'12"	S26° 00' 36"W	21.93'

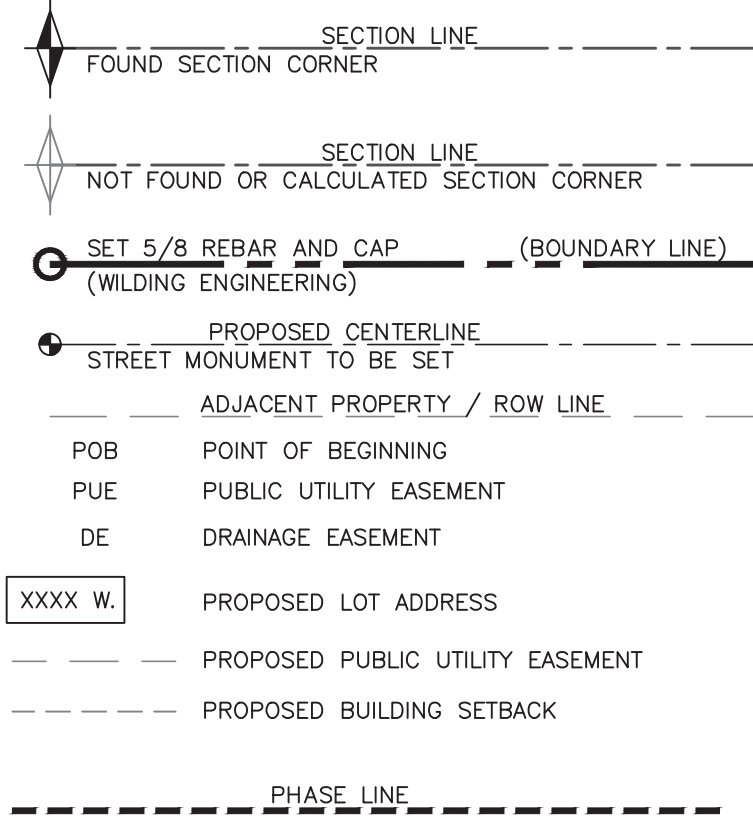


- NOTES:
- SETBACKS FOR LOTS ARE:
 - MINIMUM FRONT SETBACK= 15' (20' TO GARAGE)
 - MINIMUM SIDE SETBACK= 6'
 - MINIMUM REAR SETBACK= 20'
 - MINIMUM CORNER LOT= 15'
 - THE FOLLOWING LOTS HAVE ADJUSTED FRONT SETBACK LINES:

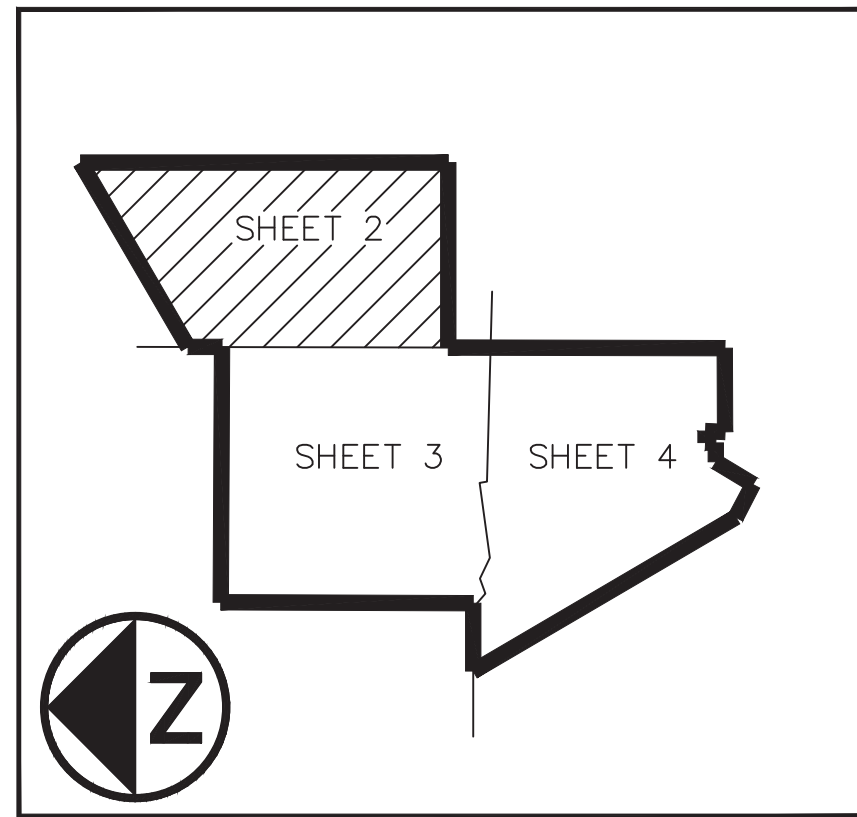
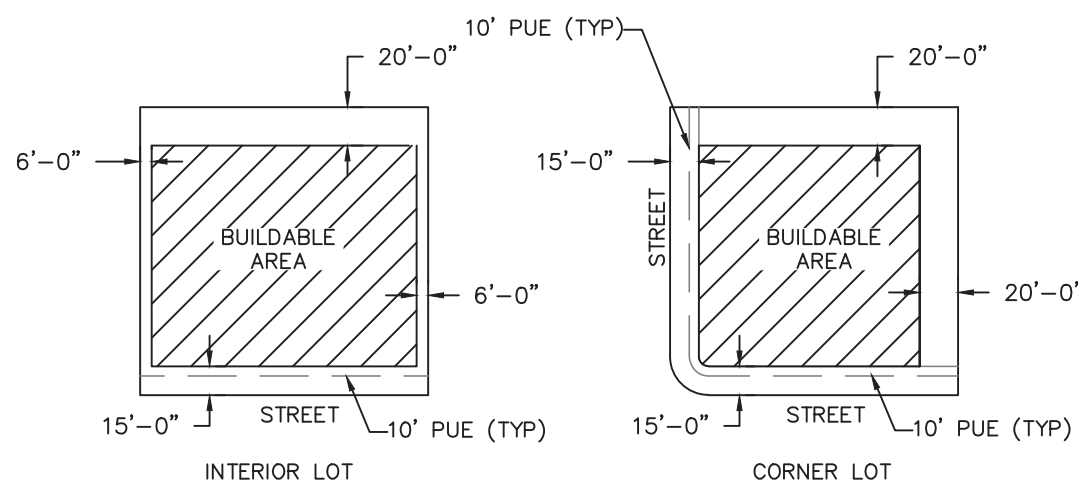
LOT NO.	SETBACK
112	20
123	20
124	20
434	25
706	25
707	25
708	25
 - MINIMUM LOT SIZE= 7500 SF
 - PUBLIC UTILITY EASEMENTS (PUE) ARE 10' ALONG THE FRONT OF ALL LOTS.
 - A WILDING ENGINEERING REBAR AND CAP WILL BE SET AT THE LOT CORNERS AND THE OVERALL BOUNDARY CORNERS.
 - THE PROPERTY IS PART OF THE HILLSIDE SENSITIVE OVERLAY ZONE, KNOWN AS THE SENSITIVE LANDS OVERLAY ZONE, AS PER DCMC CHAPTER 9-16.
 - ALL FIRE PROTECTION PLANS REQUIRE 3RD PARTY REVIEW PRIOR TO BE SUBMITTED TO THE UNIFIED FIRE AUTHORITY.
 - LOTS WITH AN [R] ARE REQUIRED TO HAVE ONSITE RETENTION

Line Table		
Line #	Direction	Length
L1	S20°00'03"E	4.87'
L2	N20°00'03"W	11.13'
L3	N20°00'03"W	26.26'
L4	N20°00'03"W	20.00'
L5	S47°19'20"W	58.04'
L6	N0°00'00"E	13.89'
L7	N0°00'00"E	48.16'
L8	N0°00'00"E	57.98'
L9	S20°00'03"E	82.36'
L10	N47°31'11"E	17.67'
L11	N47°31'11"E	16.18'
L12	S57°27'59"W	25.75'
L13	S57°27'59"W	24.88'
L14	N89°51'20"W	12.33'

LEGEND



TYPICAL BUILDING SETBACKS



KEY MAP
SCALE: 1" = 1000'

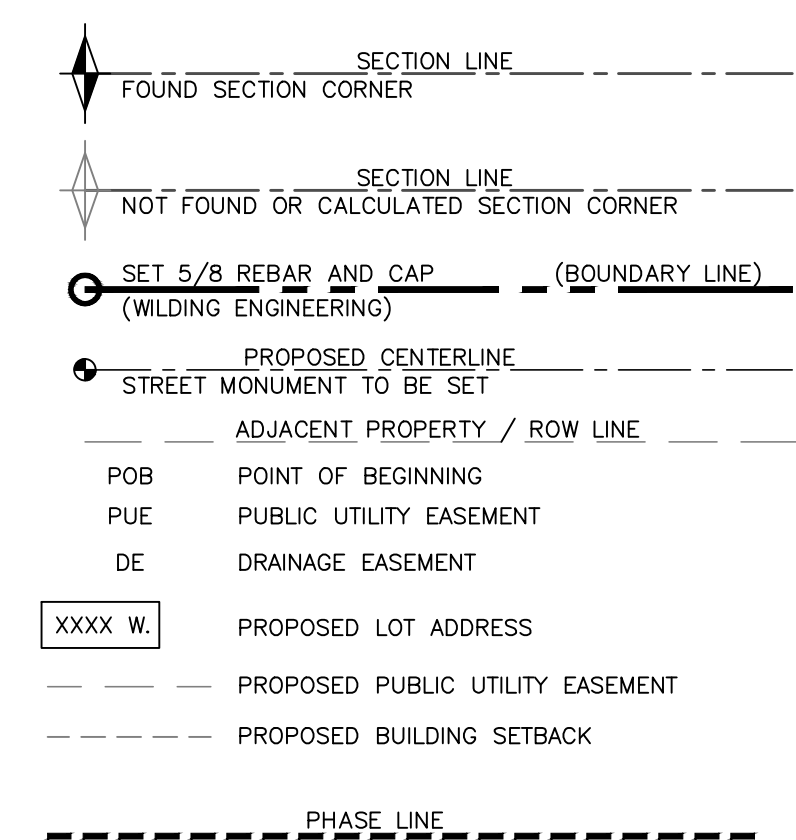
Curve Table					
Curve #	Radius	Length	Delta	Chord Bearing	Chord Distance
C65	250.00	51.95'	011°54'23"	N59° 26' 49"E	51.86'
C66	250.00	106.00'	024°17'37"	N77° 32' 49"E	105.21'
C67	15.00	23.44'	089°32'57"	N44° 55' 08"E	21.13'
C68	225.00	143.93'	036°39'03"	N71° 49' 08"E	141.49'
C69	225.00	161.16'	041°02'21"	S74° 00' 47"W	157.74'
C70	225.00	22.02'	005°36'28"	S56° 17' 51"W	22.01'
C71	200.00	107.59'	030°49'24"	S15° 29' 13"E	106.30'
C72	225.00	261.55'	066°36'08"	N61° 13' 54"E	247.07'
C73	285.00	309.54'	062°13'48"	N59° 02' 44"E	294.55'
C74	285.00	143.03'	028°45'13"	S42° 18' 26"W	141.53'
C75	285.00	166.52'	033°28'35"	S73° 25' 20"W	164.16'
C76	225.00	159.09'	040°30'43"	N20° 24' 59"E	155.80'
C77	300.00	365.69'	069°50'30"	N35° 04' 52"E	343.47'
C78	400.00	147.90'	021°11'09"	N80° 35' 42"E	147.06'
C79	575.00	251.52'	025°03'46"	N78° 39' 23"E	249.52'
C80	575.00	63.85'	006°21'45"	N62° 56' 38"E	63.82'
C81	575.00	32.04'	003°11'33"	N89° 35' 29"E	32.04'
C82	575.00	219.48'	021°52'12"	N77° 03' 37"E	218.15'
C83	1000.00	33.68'	001°55'46"	S01° 02' 24"E	33.68'
C84	275.00	161.53'	033°39'15"	S16° 14' 26"E	159.22'
C85	275.00	159.41'	033°12'44"	S16° 27' 42"E	157.18'
C86	550.00	26.23'	002°43'56"	N61° 07' 44"E	26.23'
C87	15.00	22.11'	084°26'14"	S75° 17' 11"E	20.16'
C88	250.00	52.84'	012°06'39"	N27° 00' 44"W	52.74'
C89	600.00	21.02'	002°00'25"	N60° 45' 58"E	21.01'
C90	15.00	24.83'	094°50'14"	S14° 21' 03"W	22.09'
C91	300.00	154.40'	029°29'20"	N18° 19' 24"W	152.70'
C92	15.00	3.51'	013°23'58"	N10° 16' 43"W	3.50'
C93	300.00	74.61'	014°14'58"	N24° 25' 05"W	74.42'
C94	15.00	26.89'	102°43'52"	N19° 49' 23"E	23.43'
C95	550.00	106.91'	011°08'15"	S76° 45' 26"W	106.74'
C96	550.00	80.28'	008°21'46"	S86° 30' 26"W	80.20'
C97	550.00	4.79'	000°29'57"	N89° 03' 42"W	4.79'
C98	425.00	4.34'	000°35'06"	N89° 06' 17"E	4.34'
C99	425.00	76.40'	010°18'01"	S85° 27' 09"W	76.30'
C100	425.00	76.40'	010°18'01"	S75° 09' 08"W	76.30'
C101	325.00	13.65'	002°24'26"	S68° 47' 55"W	13.65'
C102	325.00	68.34'	012°02'51"	S61° 34' 16"W	68.21'
C103	325.00	69.83'	012°18'37"	S49° 23' 32"W	69.69'
C104	325.00	66.93'	011°47'59"	S37° 20' 14"W	66.81'
C105	325.00	71.70'	012°38'26"	S25° 07' 01"W	71.56'
C106	325.00	69.03'	012°10'09"	S12° 42' 43"W	68.90'
C107	325.00	36.68'	006°28'01"	S03° 23' 38"W	36.66'
C108	15.00	24.39'	093°10'43"	N46° 44' 59"E	21.79'
C109	200.00	36.78'	010°32'14"	S05° 25' 45"W	36.73'
C110	200.00	104.63'	029°58'29"	S25° 41' 06"W	103.44'
C111	15.00	22.73'	086°49'13"	N43° 14' 59"W	20.62'
C112	250.00	74.59'	017°05'42"	N17° 23' 23"E	74.31'
C113	15.00	21.29'	081°19'06"	S49° 30' 04"W	19.55'
C114	15.00	23.56'	090°00'00"	S44° 50' 22"E	21.21'
C115	275.00	110.26'	022°58'25"	N11° 38' 50"E	109.53'
C116	275.00	123.50'	025°43'49"	N35° 59' 56"E	122.48'
C117	275.00	101.45'	021°08'17"	N59° 25' 59"E	100.88'
C118	375.00	65.26'	009°58'18"	S86° 12' 07"W	65.18'
C119	375.00	73.40'	011°12'51"	S75° 36' 33"W	73.28'
C120	15.00	22.73'	086°48'27"	N45° 24' 31"W	20.61'
C121	975.00	32.84'	001°55'46"	N01° 02' 24"W	32.83'
C122	15.00	23.56'	090°00'00"	N44° 55' 29"E	21.21'
C123	250.00	61.79'	014°09'44"	S82° 50' 37"W	61.64'
C124	250.00	66.81'	015°18'41"	S68° 06' 25"W	66.61'
C125	250.00	66.47'	015°14'05"	S52° 50' 02"W	66.28'
C126	250.00	19.49'	004°28'01"	S42° 58' 58"W	19.49'
C127	15.00	23.25'	088°48'48"	N85° 09' 21"E	20.99'
C128	15.00	13.62'	052°01'12"	S24° 25' 39"E	13.16'
C129	50.00	53.21'	060°58'37"	N28° 54' 21"W	50.74'
C130	50.00	47.68'	054°38'23"	N86° 42' 50"W	45.90'
C131	50.00	49.54'	056°46'14"	S37° 34' 51"W	47.54'
C132	50.00	47.49'	054°25'06"	S18° 00' 49"E	45.72'
C133	50.00	49.95'	057°14'05"	S73° 50' 24"E	47.90'
C134	15.00	13.62'	052°01'12"	N76° 26' 51"W	13.16'
C135	15.00	23.87'	091°11'12"	N04° 50' 39"W	21.43'
C136	225.00	193.11'	049°10'32"	N65° 20' 13"E	187.24'
C137	200.00	141.68'	040°35'20"	N20° 27' 18"E	138.74'
C138	300.00	199.18'	038°02'28"	N18° 51' 36"W	195.54'
C139	225.00	53.16'	013°32'13"	S33° 58' 51"W	53.04'
C140	225.00	67.50'	017°11'22"	S18° 37' 04"W	67.25'
C141	225.00	38.73'	009°51'45"	S05° 05' 30"W	38.68'
C142	325.00	20.14'	003°33'02"	S01° 36' 53"E	20.14'
C143	325.00	71.45'	012°35'48"	S09° 41' 18"E	71.31'
C144	325.00	79.67'	014°02'43"	S23° 00' 33"E	79.47'
C145	15.00	25.19'	096°12'21"	N18° 04' 16"E	22.33'
C146	260.00	97.82'	021°33'22"	S76° 57' 07"W	97.24'
C147	260.00	11.03'	002°25'50"	S88° 56' 43"W	11.03'

Curve Table					
Curve #	Radius	Length	Delta	Chord Bearing	Chord Distance
C148	250.00	42.39'	009°42'55"	N32° 47' 17"E	42.34'
C149	250.00	68.64'	015°43'55"	N45° 30' 43"E	68.43'
C150	250.00	66.56'	015°15'13"	N61° 00' 16"E	66.36'
C151	250.00	64.71'	014°49'49"	N76° 02' 47"E	64.53'
C152	250.00	48.31'	011°04'16"	N88° 59' 50"E	48.23'
C153	200.00	82.64'	023°40'32"	N82° 41' 42"E	82.06'
C154	15.00	24.56'	093°48'11"	N23° 57' 20"E	21.91'
C155	225.00	66.88'	017°01'52"	N14° 25' 49"W	66.64'
C156	225.00	22.93'	005°50'22"	N02° 59' 42"W	22.92'
C157	15.00	23.56'	090°00'00"	N45° 04' 31"W	21.21'
C158	200.00	40.12'	011°29'35"	S84° 10' 42"W	40.05'
C159	200.00	131.54'	037°40'57"	S59° 35' 26"W	129.18'
C160	175.00	123.97'	040°35'20"	S20° 27' 18"W	121.40'
C161	15.00	28.12'	107°23'55"	S72° 48' 25"E	24.18'
C162	275.00	105.94'	022°04'23"	N18° 00' 22"W	105.29'
C163	275.00	34.22'	007°07'48"	N03° 24' 16"W	34.20'
C164	15.00	27.13'	103°36'56"	S80° 51' 01"E	23.58'
C165	260.00	88.09'	019°24'41"	N37° 38' 10"E	87.67'
C166	300.00	93.62'	017°52'47"	N08° 21' 12"W	93.24'
C167	175.00	58.13'	019°01'57"	S09° 35' 29"E	57.86'
C168	1025.00	34.52'	001°55'46"	N01° 02' 24"W	34.52'
C169	15.00	22.59'	086°16'15"	S41° 07' 50"W	20.51'
C170	250.00	94.00'	021°32'37"	S10° 11' 07"E	93.45'
C171	600.00	76.36'	007°17'29"	N80° 37' 13"E	76.30'
C172	600.00	80.23'	007°39'42"	N73° 08' 38"E	80.17'
C173	15.00	20.32'	077°37'09"	N71° 52' 38"W	18.80'
C174	250.00	52.58'	012°02'59"	S27° 02' 34"E	52.48'
C175	250.00	92.34'	021°09'45"	S10° 26' 12"E	91.81'
C177	15.00	23.73'	090°38'45"	N45° 10' 42"W	21.33'
C178	200.00	125.68'	036°00'18"	S71° 29' 46"W	123.62'
C179	250.00	14.88'	003°24'40"	S55° 11' 57"W	14.88'
C180	250.00	70.61'	016°10'56"	S64° 59' 45"W	70.37'
C181	250.00	69.94'	016°01'43"	S81° 06' 04"W	69.71'
C182	250.00	23.64'	005°25'02"	N88° 10' 33"W	23.63'
C183	200.00	37.41'	010°42'58"	S89° 10' 29"W	37.35'
C184	200.00	169.95'	048°41'11"	S59° 28' 24"W	164.88'
C185	200.00	25.13'	007°11'59"	S31° 31' 49"W	25.12'
C186	310.00	37.81'	006°59'21"	S31° 25' 30"W	37.79'
C187	310.00	87.61'	016°11'30"	S43° 00' 55"W	87.31'
C188	310.00	67.91'	012°33'03"	S57° 23' 12"W	67.77'
C189	310.00	64.79'	011°58'27"	S69° 38' 57"W	64.67'
C190	310.00	72.38'	013°22'37"	S82° 19' 29"W	72.21'
C191	310.00	6.21'	001°08'50"	S89° 35' 13"W	6.21'
C192	770.00	310.20'	023°04'56"	S16° 48' 39"W	308.11'
C193	770.00	173.74'	012°55'41"	S01° 11' 40"E	173.37'

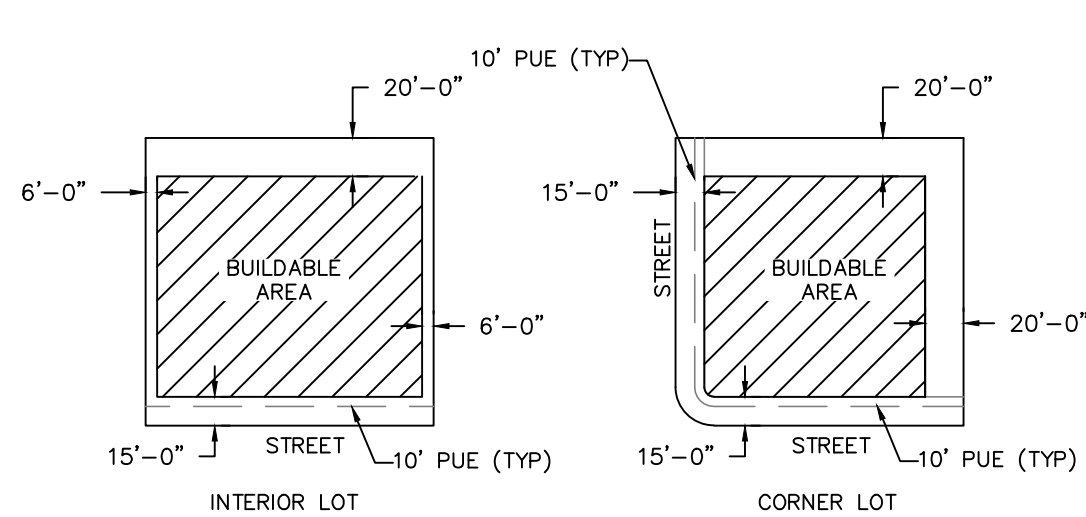
Line Table		
Line #	Direction	Length
L15	N89°51'20"W	37.91'
L16	S33°04'04"E	40.71'
L17	S33°04'04"E	63.06'
L18	N0°08'40"E	8.31'
L19	S59°45'46"W	69.95'
L20	S33°04'04"E	5.57'
L21	N59°45'46"E	40.64'
L22	S33°04'04"E	17.86'
L23	S89°57'00"W	23.13'
L24	N0°11'39"E	23.03'
L25	N0°12'08"E	23.04'
L26	S40°40'20"W	8.76'
L27	S0°04'31"E	12.25'
L28	S89°55'29"W	10.76'
L29	S50°26'15"E	12.29'
L30	N50°26'15"W	102.71'
L31	S50°26'15"E	10.63'
L32	N89°50'22"W	16.04'
L33	S70°00'07"W	5.00'
L34	S52°59'38"W	58.75'
L35	N27°49'48"E	32.31'
L36	N49°19'40"W	96.73'
L37	S89°51'20"E	64.97'

Line Table		
Line #	Direction	Length
L38	S30°53'55"E	10.67'
L41	S85°28'02"E	26.18'
L42	S85°28'02"E	9.59'
L43	S0°09'38"W	5.43'
L44	N27°55'50"E	15.54'
L45	S39°28'50"W	10.94'
L46	N58°13'21"E	3.39'
L47	S85°28'02"E	35.78'
L48	N0°35'12"E	53.77'
L49	S87°36'03"E	50.03'
L50	S0°35'12"W	52.18'
L51	N0°04'31"W	12.19'
L53	N2°00'17"W	33.32'
L54	N2°00'17"W	78.62'
L55	S33°04'04"E	29.97'
L56	S0°08'40"W	7.01'
L57	S0°08'40"W	13.11'
L58	N85°28'02"W	35.78'
L59	N54°52'11"W	6.39'
L60	N90°00'00"W	25.00'

LEGEND



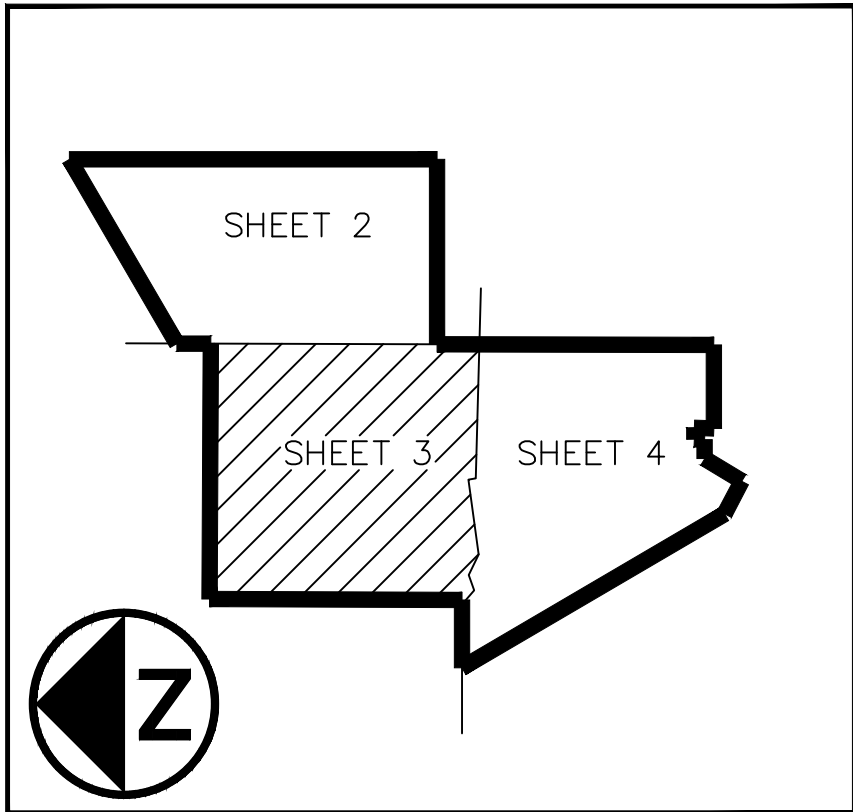
TYPICAL BUILDING SETBACKS



NOTES:

- SETBACKS FOR LOTS ARE:
 - MINIMUM FRONT SETBACK= 15' (20' TO GARAGE)
 - MINIMUM SIDE SETBACK= 6'
 - MINIMUM REAR SETBACK= 20'
 - MINIMUM CORNER LOT= 15'
- THE FOLLOWING LOTS HAVE ADJUSTED FRONT SETBACK LINES:

LOT NO.	SETBACK
112	20
123	20
124	20
434	20
706	25
707	25
708	25
- MINIMUM LOT SIZE= 7500 SF
- PUBLIC UTILITY EASEMENTS (PUE) ARE 10' ALONG THE FRONT OF ALL LOTS.
- A WILDING ENGINEERING REBAR AND CAP WILL BE SET AT THE LOT CORNERS AND THE OVERALL BOUNDARY CORNERS.
- THE PROPERTY IS PART OF THE HILLSIDE SENSITIVE OVERLAY ZONE, KNOWN AS THE SENSITIVE LANDS OVERLAY ZONE, AS PER DCMC CHAPTER 9-16.
- ALL FIRE PROTECTION PLANS REQUIRE 3RD PARTY REVIEW PRIOR TO BE SUBMITTED TO THE UNIFIED FIRE AUTHORITY.
- LOTS WITH AN[R] ARE REQUIRED TO HAVE ONSITE RETENTION



HIDDEN CANYON ESTATES
PRELIMINARY PLAT
SHEET 3 OF 5

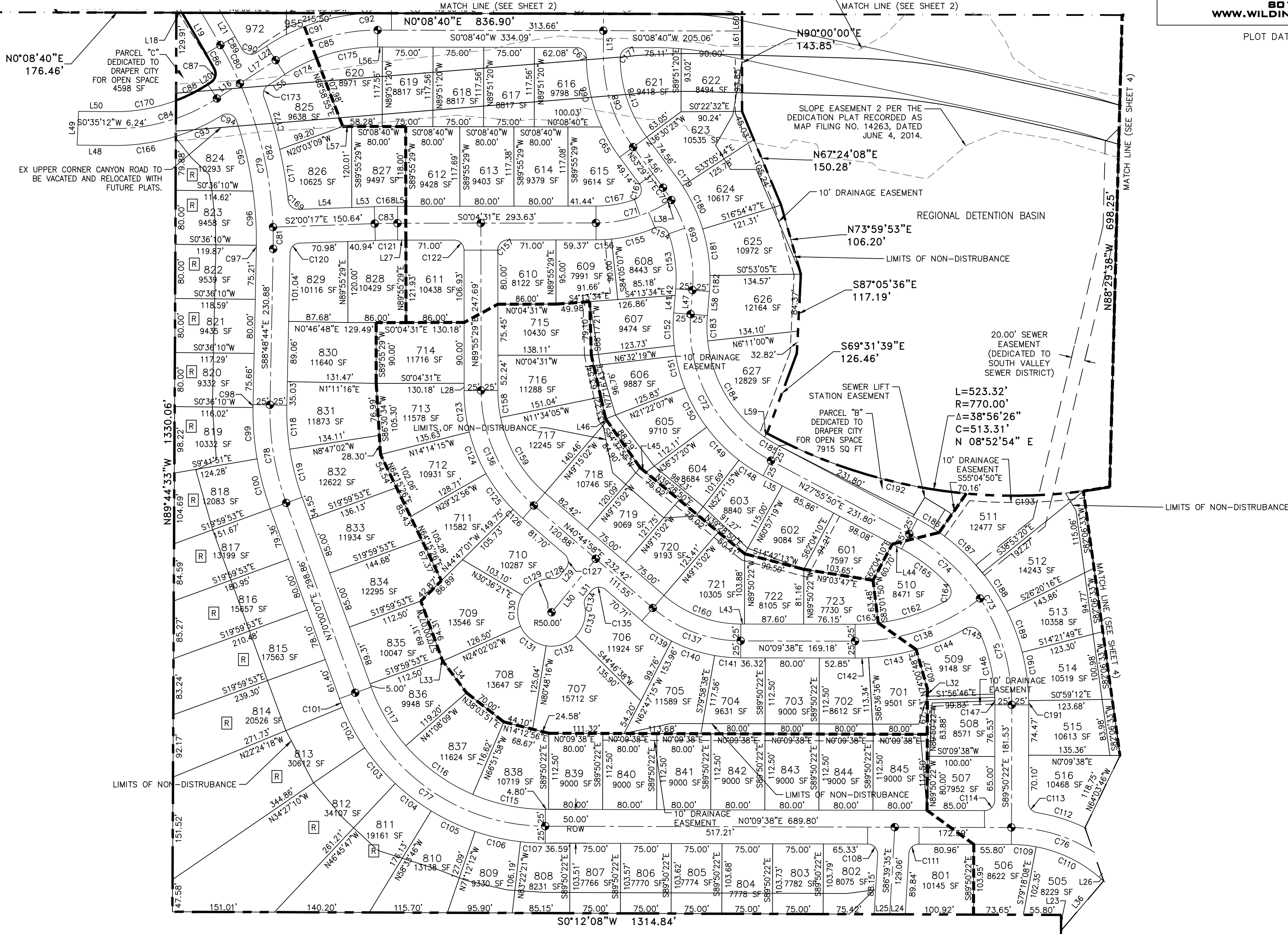
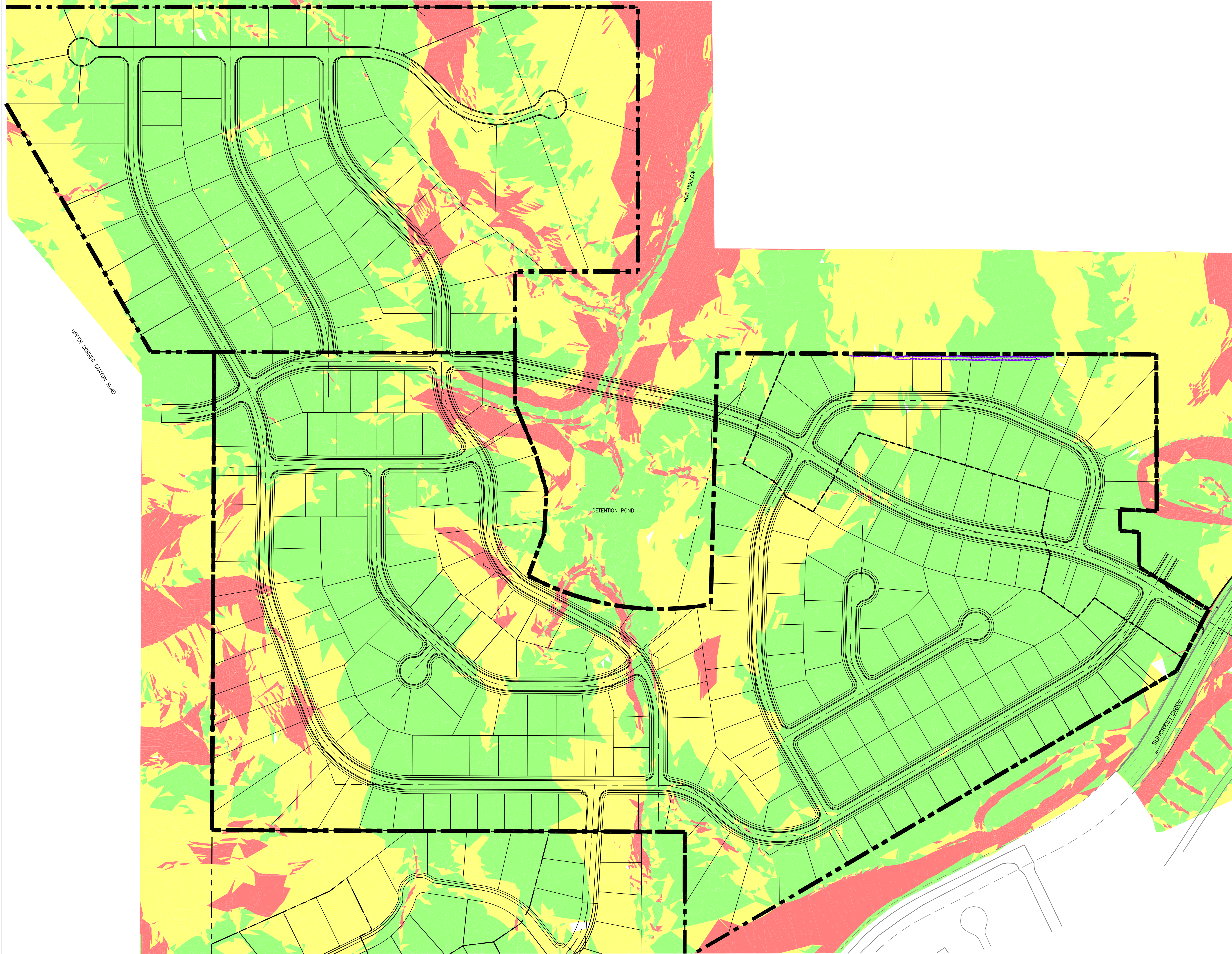


EXHIBIT E
PRE-DEVELOPMENT GRADING PLAN



DRAWING NOTES:

LEGEND

- 30% + SLOPES
- 15% TO 30% SLOPES
- 0% TO 15% SLOPES

NO.	REVISION	DATE

PROJECT INFORMATION

HIDDEN CANYON EST

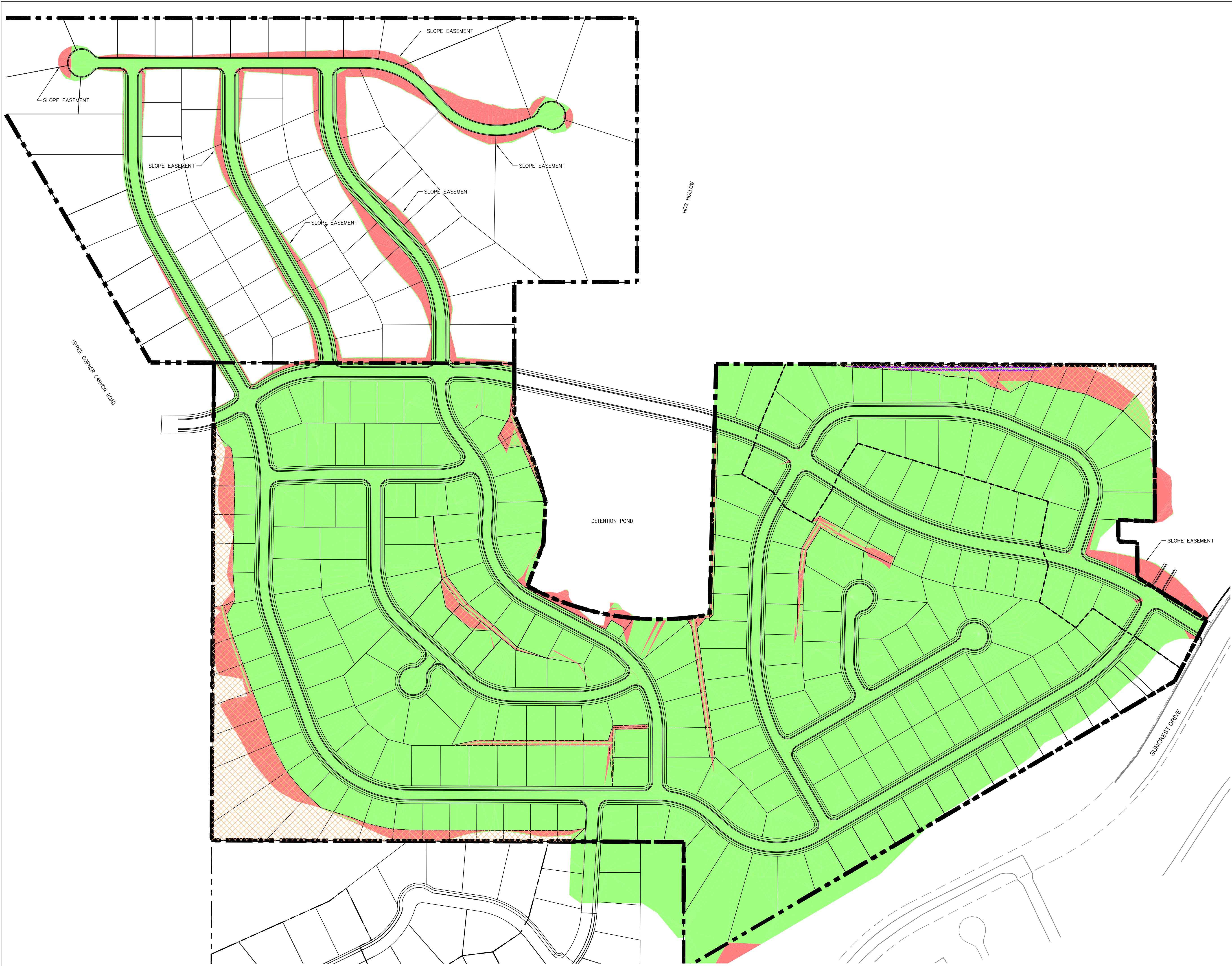
SLOPE ANALYSIS

DRAPER, UTAH

DRAWN JRP	CHECKED GPW	PROJECT # 15090
ENGINEER'S STAMP		DATE 03/03/16
		SCALE 1" = 120'
		SHEET 1 OF 1

G:\DATA\15090 Hidden Canyon Estates-Edge Homes\dwg\15090 Base HCE slope analysis PRE.dwg
PLOT DATE: Mar 03, 2016

EXHIBIT F
POST-DEVELOPMENT GRADING PLAN





WILDING
ENGINEERING

14721 SOUTH HERITAGE CREST WAY
BLUFFDALE, UTAH 84065
801.553.8112
WWW.WILDINGENGINEERING.COM

DRAWING NOTES:

LEGEND

30% + SLOPES

0% TO 30% SLOPES

LIMIT OF NON DISTURBANCE

NO.	REVISION	DATE

PROJECT INFORMATION

HIDDEN CANYON EST

SLOPE ANALYSIS
POST-DEVELOPMENT

DRAPER, UTAH

DRAWN JRP	CHECKED GPW	PROJECT # 15090
ENGINEER'S STAMP		DATE 03/03/16
		SCALE 1" = 120'
		SHEET 1 OF 1

G:\DATA\15090 Hidden Canyon Estates-Edge Homes\dwg\15090 Base HCE slope analysis POST construction.dwg
PLOT DATE: Mar 03, 2016

EXHIBIT G
SLOPE ENCROACHMENT DEVIATION LETTER



November 25, 2015

Jennifer Jastremsky, AICP Planner II
Draper City Planning Department
1020 E. Pioneer Road
Draper, UT 84020

RECEIVED

DEC 21 2015

Re: Slope construction deviation request

Ms. Jastremsky,

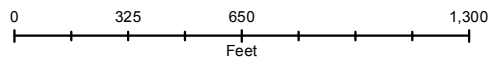
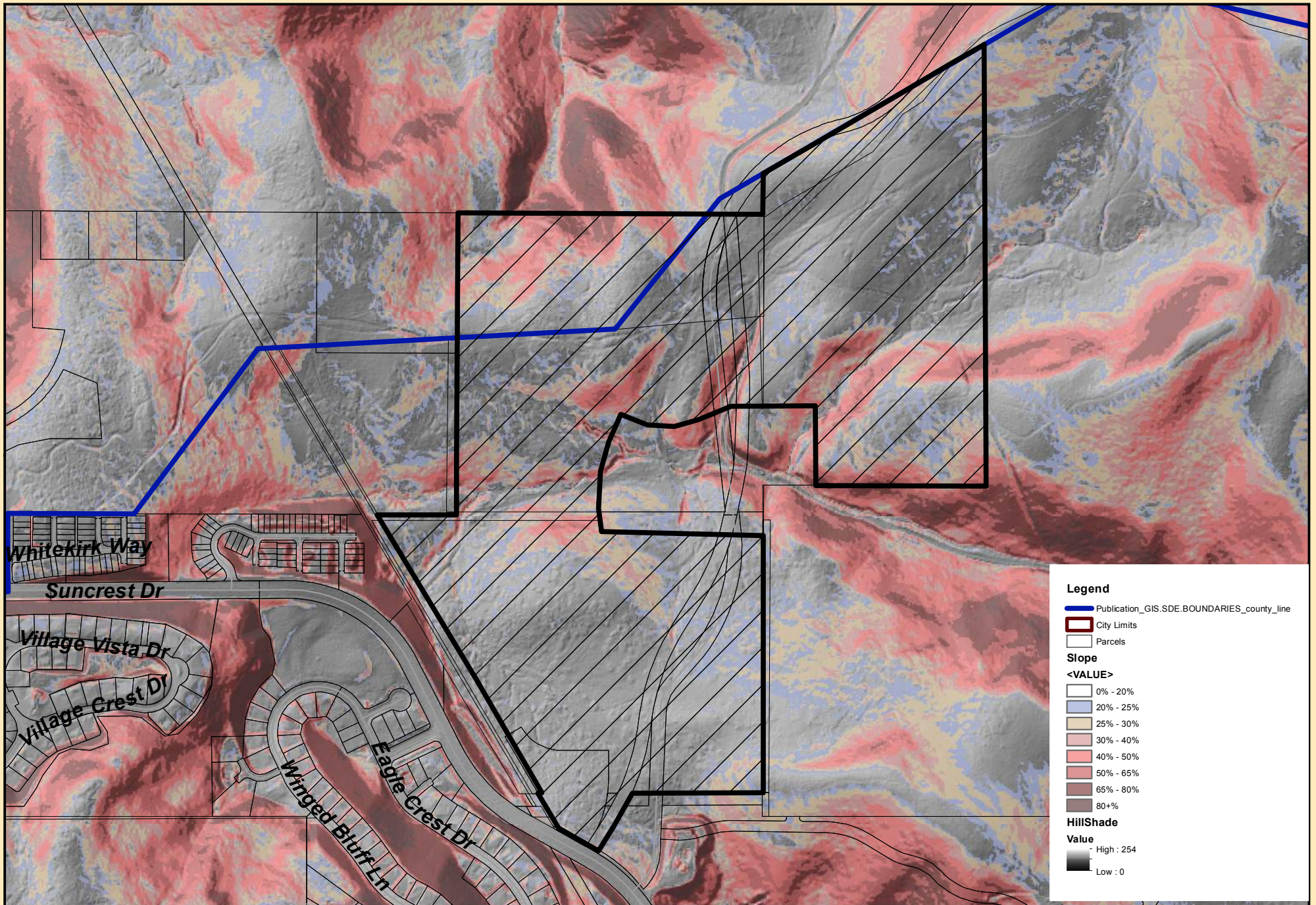
The purpose of this letter is to request a deviation to be able to grade within areas of 30% or greater slope. There are minor isolated areas of 30% or greater on the Hidden Canyon Estates site. No significant harm will result from the development of these 30% slope areas and we will be able to provide a much more functional and efficient plan by developing in these minor 30% slope area. We will meet the requirements and development standards set forth in the Sensitive Lands Overlay Zone.

Thank you for your consideration and please feel free to contact us if you have further questions.

Sincerely,
WILDING ENGINEERING, INC.

Jason Peterson, PE

EXHIBIT H
DRAPER CITY SLOPE AND HILLSHADE MAP



Note: Approximate Location

Hidden Canyon Estates Slope/Hillshade Map

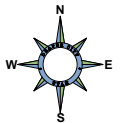
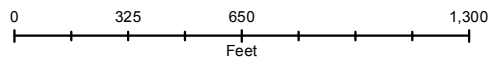
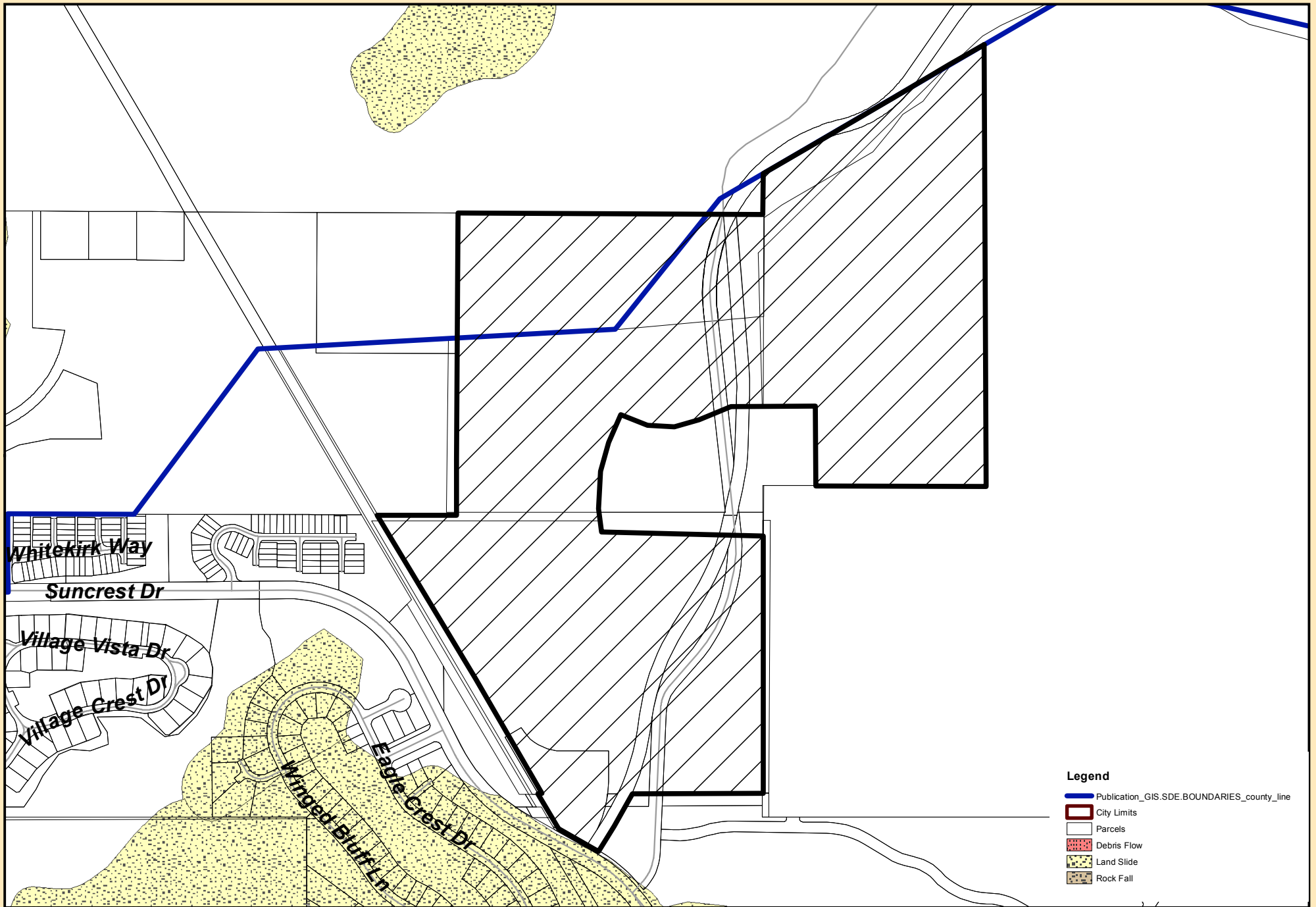


EXHIBIT I
DRAPER CITY GEOLOGIC HAZARDS MAP



Note: Approximate Location

Hidden Canyon Estates Geologic Hazards Map

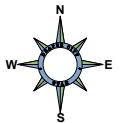


EXHIBIT J
GEO-TECHNICAL REPORT REVIEW AND
GEOLOGIC HAZARDS REPORT REVIEW



2650 North 180 East
Lehi, Utah 84043
P. 801-400-9784
F. 801-769-3336

March 17, 2016

Mr. Keith Collier,
Chief Building Official
Draper City
1020 East Pioneer Road
Draper, Utah 84020

Subject: **Third Geotechnical Review – Hidden Canyon Estates**
Southeast Corner Section 10, T4S, R1E
Draper, Utah
TG Project No. 15044

Subject Documents: IGES, Second Geotechnical Review Response, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017) dated February 26, 2016, prepared for Wasatch Land Company LLC, PO Box 216, Orem, Utah 84059.

IGES, Final Grading Plan Review, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017) dated February 26, 2016, prepared for Wasatch Land Company LLC, PO Box 216, Orem, Utah 84059.

IGES, Addendums to Geotechnical & Geological Hazard Investigation, Hidden Canyon Estates, Draper, Utah (IGES Project No. 01965-017) dated March 14, 2016, prepared for Wasatch Land Company LLC, PO Box 216, Orem, Utah 84059.

Submittal Status: **GEOTECHNICAL SUBMITTAL INCOMPLETE**

Dear Mr. Collier:

At your request, Taylor Geotechnical (TG) reviewed the IGES subject documents referenced herein. The documents were provided to TG for review on:

1. February 26, 2016, IGES Second Geotechnical Review Response, dated February 26, 2016.
2. February 29, 2016, IGES Final Grading Plan Review, dated February 26, 2016, and;

3. March 14, 2016, IGES Addendums to Geotechnical & Geological Hazard Investigation, dated March 14, 2016.

The three IGES documents were prepared in response to the following February 8, 2016, TG geotechnical review:

Taylor Geotechnical, Second Geotechnical Review - Hidden Canyon Estates, Southeast Corner Section 10, T4S, R1E, Draper, Utah (TG Project No. 15044), dated February 8, 2016, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, UT 84020.

The February 8, 2016, TG review letter was prepared in response to the following January 4, 2016, IGES report:

IGES Review Response, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017) dated January 4, 2016, prepared for Wasatch Land Company LLC, PO Box 216, Orem, Utah 84059.

The November 20, 2015, TG review letter was prepared in response to the following September 23, 2015, IGES report:

IGES report, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated September 23, 2015: prepared for Wasatch Land Company, LLC, PO Box 216, Orem, Utah 84059.

The purpose of TG's review is to evaluate whether or not IGES adequately addressed geotechnical engineering parameters at the property, as applicable to residential development, consistent with concerns for public health, safety, and welfare; reasonable professional standard of practice, and; the 2010 Draper City Geologic Hazard Ordinance.

TG Comments

The February 8, 2016, TG letter recommended Draper City request clarification for 12 items. It is our opinion that the three IGES documents referenced herein adequately responded to 11 of the 12 items (Items 1 through 6 and Items 8 through 12, inclusive).

TG Recommendations

1. Based on the requirements of the Draper City Geologic Hazard Ordinance, and the information presented in the subject documents, TG recommends Draper City not consider IGES geotechnical submittals complete from a geotechnical perspective until IGES adequately addresses Comment No. 7 in the February 8, 2016, TG letter.

2. Comment No. 7 in the February 8, 2106, TG letter (page 4), recommended Draper City:

- a) *Allow TG to provide review comments to this item after the “Final Grading Plan” has been submitted to Draper City and all Draper City requested information in regards to the final grading plan and geologic/geotechnical reviews have been provided by IGES.*
- b) *Request “review of bedrock cut slopes greater than 10 feet” be made by a qualified engineering geologist and a qualified geotechnical engineer.”*

The February 26, 2016, IGES letter provided the following response to Comment No. 7 in the February 8, 2106, TG letter:

“Comment acknowledged.”

In the March 14, 2016, IGES Addendums to Geotechnical & Geological Hazard Investigation (dated March 14, 2016) , IGES states on page 2 under Addendum No. 3 the following:

“The purpose for the review is to observe the cuts for any adverse geologic features that may be of concern; e.g., out-of-slope bedding or jointing, unstable soils, springs or seeps, etc. The review will be based on qualitative judgment from observations made by a qualified engineering geologist and/or a qualified geotechnical engineer looking for out-of-slope bedding or jointing unstable soils, springs or seeps, ect.”

TG recommends Draper City request IGES clarify why, in the February 26, 2016, IGES response letter, IGES acknowledged review of bedrock cut slopes greater than 10 feet in height will be performed by both a qualified engineering geologist and a qualified geotechnical engineer, and the apparent change in the March 14, 2016, IGES Addendums to Geotechnical & Geological Hazard Investigation, where IGES proposes review of bedrock cut slopes greater than 10 feet high, made by either a qualified engineering geologist *and/or* a qualified geotechnical engineer.

- 3. TG recommends Draper City require review of bedrock cut slopes greater than 10 feet high be made by a qualified engineering geologist *and* a qualified geotechnical engineer.
- 4. TG recommends Draper City require review of bedrock cut slopes greater than 10 feet high be based on *quantitative* data collected by a qualified engineering geologist and a qualified geotechnical engineer and not *qualitative judgment* from observations made by a qualified engineering geologist and a qualified geotechnical engineer.

5. TG recommends Draper City require the quantitative data recommended in the preceding item (Item 4) consist of, at a minimum:
 - a. Recording of geologic structural data such as orientation (strike) and inclination (dip) of bedding planes, faults, joints, fractures, etc., and;
 - b. Annotated photographic documentation of each bedrock cut slopes greater than 10 feet high or a geologic log of each bedrock cut slope greater than 10 feet high. Photographic annotation or geologic logs should contain, at a minimum, aerial distribution of geologic units exposed in cut slopes and the geologic structural data recommended in the preceding item.
6. TG recommends Draper City require the Applicant submit the geologic and geotechnical documentation of cut slopes greater than 10 feet high in a letter report at the completion of grading.
7. On March 17, 2016, Simon Associates, LLC, (SA), submitted to Draper City a geological review of the following document:

IGES, Second Review Response – Geology, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated February 3, 2016, prepared for Wasatch Land Company,, LLC, PO Box 216, Orem, Utah 84059.
- TG recommends, prior to project approval, Draper City require IGES respond to the March 17, 2016, SA letter.
8. In response to Item 11 of the TG February 8, 2016 review letter, IGES stated the “*the applicant is currently addressing the wetlands issue.*” Prior to plan approval, TG recommends the applicant submit the findings of the wetlands evaluation “*including the legal circumstances surrounding development on or adjacent to wetlands areas*” (recommendation by IGES in the September 23, 2015 report). TG understands that additional review comments by the applicant to this item will be addressed by the Draper City Engineering Department.
9. This letter constitutes the third geotechnical review letter. In order to clarify remaining issues, TG recommends Draper City consider a project meeting with the Applicant and Consultant (prior to the Consultant submitting a response letter), to discuss the geotechnical issues presented herein.

Additional comments may be required based upon final geological reviews by SA and final geotechnical comments submitted by IGES.

CLOSURE

This letter is issued solely in response to the Consultants' evaluation of the referenced site. Comments and recommendations in this review are based on data presented in the subject documents referenced herein. TG accordingly provides no warranty that the data in the subject documents referenced herein are correct or accurate. TG has not performed an independent site evaluation.

Comments and recommendations presented herein are provided to aid Draper City in reducing risks from geotechnical hazards and to protect public health, safety, and welfare. This review does not forego other geotechnical items that may come to the attention of TG during the geologic/geotechnical review process.

All services performed by TG for this review were provided for the exclusive use and benefit of Draper City. No other person or entity is entitled to use or rely upon any of the information or reports generated by TG as a result of this review.

TG would be pleased to meet with Draper City and/or the Consultant, at a mutually convenient time, to discuss any of the issues presented herein. In the meantime, should you have any questions, please feel free to contact the undersigned. The opportunity to be of service to Draper City is appreciated.

Respectfully submitted,
Taylor Geotechnical

Alanson O. Taylor, P.E.
Principal

AOT/DBS

Dist: 1/addressee
1/Brandon Watson, Edge Homes
1/David Glass, IGES
1/Angie Olson, Draper City
1/April Gomez, Draper City
1/Vivian Pearson, Draper City
1/Jennifer Jastremsky, Draper City
1/Scott Cooley, Draper City
1/David Simon, SA



Simon Associates LLC

geologic, environmental, & geotechnical consultants

1981 East Curtis Drive
Salt Lake City, Utah 84121
801.718.2231

March 17, 2016

Mr. Keith Collier
Chief Building Official
Draper City
1020 East Pioneer Road
Draper, Utah 84020

Subject: Geologic Review No. 3
Hidden Canyon Estates
Southeast Corner Section 10, T4S, R1E
Draper, Utah
SA Project No: 15-129

Report: IGES Second Review Response – Geology, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated February 3, 2016, prepared for Wasatch Land Company, P.O. Box 216, Orem, Utah 84059.

Geologic Submittal Status: **INCOMPLETE SUBMITTAL**

Dear Mr. Collier,

At your request, Simon Associates LLC (SA) reviewed the above referenced February 3, 2016, IGES letter (IGES, 2016a). The chronology of correspondence follows:

1. The February 3, 2016, IGES letter (IGES, 2016a) was submitted in response to a January 21, 2016, SA review letter (SA, 2016a).
2. The January 21, 2016, SA review letter (SA, 2016a) was written in response to a January 4, 2016, IGES letter (IGES, 2016b).
3. The January 4, 2016, IGES letter (IGES, 2016b) was submitted in response to a November 16, 2015, SA review letter (SA, 2015a).

4. The November 16, 2015, SA review letter (SA, 2015a) was written in response to a September 23, 2015, IGES report (IGES, 2015).

The purpose of SA's review is to evaluate whether or not IGES documents adequately address geologic conditions at the site, consistent with concerns for public health, safety, and welfare; reasonable professional standards-of-care, and; Draper City's Geologic Hazards Ordinance (Draper City, 2010).

SA's scope-of-work included:

- a. Review of pertinent geologic reports and maps (Biek, 2005a, 2005b; PSI, 2004a, 2004b; Machette, 1992; Personius and Scott, 1992; McCalpin, 2003, 2004a, 2004b), aerial photographs (UGS, 2016), and the Draper City Geologic Hazards Ordinance (Draper City, 2010).
- b. Site visits on July 17, 20, 21, 22, and 23, 2015, to observe general site conditions and test pit/trench exposures (SA, 2015a; 2015b; 2015c).
- c. Attendance at a scoping meeting on May 5, 2015 (SA, 2015d), and;
- d. Attendance at project meetings on August 18, 2015 (SA, 2015e) and January 29, 2016 (SA, 2016b).

SA Comments

The January 21, 2016, SA letter (SA, 2016a) recommended Draper City request clarification for 13 items. It is our opinion that the February 3, 2016, IGES letter (IGES, 2016a) (submitted in response to the January 21, 2016, SA letter) (SA, 2016a) adequately responded to 11 of the 13 items (Items 3 through 13, inclusive).

SA Recommendations

Based on the requirements of the Draper City Geologic Hazard Ordinance (Draper City, 2010), SA recommends Draper City not consider IGES submittals complete from a

geologic perspective until IGES adequately addresses the following items from the February 3, 2016, IGES letter (IGES, 2016a):

1. Comment No. 1a in the January 21, 2016, SA letter (SA, 2016a) states:

"Re-evaluate whether the fault in question is truly associated with the Wasatch fault zone and therefore Holocene-age as defined in the Draper City geologic hazard ordinance (Draper City, 2010). Review of Biek (2005b), may prove beneficial."

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 1a:

"IGES has reviewed the recommended Biek (2005b) publication, and still concludes that the fault in question is associated with the Wasatch Fault Zone and therefore Holocene-age."

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 1a:

SA recommends Draper City request IGES:

- a. *Provide adequate data to support IGES' conclusion that the fault in question is associated with the Wasatch Fault Zone.*
- b. *Review the geologic hazard investigations for the proposed Edelweiss subdivision (provided to IGES by SA on March 10, 2016 via email) for data regarding the age of the fault in question. The fault in question also crosses the proposed Edelweiss subdivision (see attached map from Biek, 2005a), where the fault was trenched in two locations and concluded to be pre-Holocene-age. SA is not stipulating or intentional implying a preferred age for the fault in question. The age of the fault in question should be determined by IGES.*

Do to potential unintentional consequences (i.e., impacts on other subdivisions, etc.), it is SA's opinion that great care should be taken and

sufficient data obtained, prior to assigning a Holocene-age to any fault, and in particular the fault in question.

2. Comment No. 1b in the January 21, 2016, SA letter (SA, 2016a) states:

"Provide a map depicting the location of the fault to the west and outside of the Hidden Canyon Estates property where there is a noted topographic change and the location of the "Geomorphic expression of the fault scarp may be present on the western side of Suncrest Drive at this location, and therefore outside of the Hidden Canyon Estates property."

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 1b:

"See the attached Figure R-1a through R-1d, which identify the suspected fault scarp and project the approximate location of the fault to the west of the Hidden Canyon Estates property. Corresponding explanatory text was provided in the January 4, 2016 IGES response letter (see page 4, the last bullet in the Response to Comment No. 4b(i)). The closest the fault passes to the property with this interpretation of the data is approximately 80 feet, as the fault crosses from the western to eastern side of Suncrest Drive in the southwestern portion of the property near the location of where Trench-1 was excavated."

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 1b:

- a. IGES did not provide the requested map depicting the location of the fault to the west and outside of the Hidden Canyon Estates property. *SA recommends Draper City request IGES provide the requested map, which was also discussed at the January 29, 2016, project meeting (SA, 2016b). A 1:24,000 scale base map will be sufficient.*

Pre-development 1951, 1969, 1975, 1994, and 1998, 7.5 minute USGS quadrangles are available from the USGS at:
<http://geonames.usgs.gov/apex/f?p=262:1:11057143890498>.

- b. In regards to the location of the fault, the February 3, 2016, IGES letter (IGES, 2016a) refers to a "suspected fault scarp" and IGES has "project[ed] the approximate location of the fault to the west of the Hidden Canyon Estates property."

Do to potential unintentional consequences (i.e., impacts on other subdivisions, etc.), it is SA's opinion that great care should be taken and sufficient data obtained, if IGES is going to propose a location for the fault that differs from the location depicted by Biek (2005a). The use of "suspected," "projected," and "approximate," by definition, indicates doubt, uncertainty, and conjecture. *SA recommends Draper City not accept conclusions based on doubt, uncertainty, and conjecture and request IGES provide definitive data to support the location of the fault in question.*

- c. Figures R-1a through R-1d in the February 3, 2016, IGES letter (IGES, 2016a) appear to be sequential and from 1993 Google Earth historical image. *SA recommends Draper City request IGES provide an index map for the four figures.*
- d. IGES might find it pertinent that historical Google Earth images, when viewed obliquely, do not reflect historical topography; topography is current with the historical Google Earth image draped over the current topography. *SA recommends Draper City request IGES:*
 - i. *Indicate whether or not the location of the "suspected fault scarp" depicted on Figures R-1a through R-1d in the February 3, 2016, IGES letter (IGES, 2016a), was based on analysis of stereo-paired aerial photographs and not only Google Earth imagery.*
 - ii. *Confirm the "scarp" depicted on Figures R-1a through R-1d is not a road cut for Suncrest Drive.*

3. Comment No. 1c in the January 21, 2016, SA letter (SA, 2016a) states:

"Re-consider the location of the fault as shown on Plate A-2, considering IGES did not document the presence of a fault in Trench-1. IGES indicates the location of the fault as shown on Plate A-2 is the location by Biek (2005a). Plate A-2 should reflect the findings of the IGES investigation."

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 1c:

"See the attached updated Plate A-2."

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 1c:

IGES updated Plate A-2 depicts the fault about 80 feet to the west of the southern part of the Property. Based on data presented by IGES and the Draper City Geologic Hazard Ordinance, it is SA's opinion insufficient data has been provided to substantiate IGES' conclusion that "The closest the fault passes to the property with this interpretation of the data is approximately 80 feet, as the fault crosses from the western to eastern side of Suncrest Drive in the southwestern portion of the property near the location of where Trench-1 was excavated."

SA recommends Draper City request IGES provide adequate data to support their conclusion that the fault is located about 80 feet west of the Property.

4. Comment No. 2 in the January 21, 2016, SA letter (SA, 2016a) states:

"For clarification, it is SA's opinion that the "headscarps" require further investigation. SA discussions included mention that all geologic features that could pose a hazard had to be investigated. Three of the headscarps, in our opinion, do not appear to be related to IGES' reference to McCalpin (2004) [2004b] landslide RRS #18."

"Based on our evaluation, it does not appear IGES has any trenches that cross the headscarps or "... test pits excavated in these areas of the Hidden Canyon Estates property..."

"SA recommends Draper City request IGES provide appropriate data for whether or not the headscarps are present and if so, the ramifications of the headscarps and associated landslides in light of proposed development. It is important to note that proposed development may change "... the present climatic regime ..." by modifications to topography (i.e., grading) and climatic conditions (i.e., introduction of landscape irrigation)."

IGES response to January 21, 2016, SA letter (SA, 2016a) comment No. 2:

"IGES takes note that the proposed development may alter the stability of relict landslides, given a change in topography by grading and climatic conditions by way of irrigation. However, though McCalpin (2004) displays four "relict headscarps" on the Hidden Canyon Estates property and these were duly noted by IGES (see the first paragraph on Page 9 of the September 23, 2015 IGES report), IGES did not determine these to be headscarps. Aerial photograph (see IGES, 2015), LiDAR, and Google Earth imagery reviewed for this investigation did not display evidence of headscarps in these areas, and subsequent fieldwork (including both site reconnaissance and subsurface investigations) also did not provide confirmatory evidence of the features being headscarps. From east to west, the vicinity of the four McCalpin relict headscarps were examined by way of TP-19, TP-20, TP-13, and TP-10, respectively (see IGES Figure R-2, attached). None of these test pits exhibited shear planes, buried soil horizons, jumbled soil structure, or other evidence for the presence of a landslide headscarp or associated landslide deposits."

"Given the absence of headscarp evidence and/or associated landslide deposits in these areas, and the presence alluvial, fluvial, and colluvial deposits in these areas, it is thus concluded by IGES that these features are erosional in nature."

SA comments to IGES February 3, 2016, response (IGES, 2016a), to January 21, 2016, (SA, 2016a) SA comment No. 2:

Test pits TP-10, TP-13, and TP-19, (see IGES Figure R-2, attached), are not located within the suspect features and TP-20 is depicted at the edge of one of the features. During the geologic field reviews:

- a. Prior to observing each test pit, SA (and Taylor Geotechnical) asked Mr. Payton and/or Mr. Doumit the purpose of each test pit.
- b. IGES never mentioned that TP-10, TP-13, TP-19, and TP-20 were located to evaluate the McCalpin (2004) headscarps.
- c. IGES indicated the four test pits were located for geotechnical analyses.

Because the referenced test pits are not located within the headscarp features, it is our opinion that sufficient data has not been provided to substantiate IGES' conclusion that the "... features are erosional in nature." *SA recommends:*

- a. *Draper City request IGES provide additional data to substantiate IGES' conclusion that the "... features are erosional in nature."*
 - b. *Draper City require a scoping meeting (should IGES choose to perform additional field exploration) prior to commence of any field work, as stipulated in the Draper City geologic hazard ordinance.*
5. *SA recommends Draper City request IGES provide adequate data to support the retraction of any statements in prior IGES reports/letters.*
 6. This letter constitutes the third review letter. In order to clarify remaining issues, *SA recommends Draper City schedule a project meeting with the Applicant and Consultant (prior to the Consultant submitting a response letter), to discuss the geologic issues presented herein.*

Closure

Comments and recommendations in this review are based on data presented in the referenced Consultant's report. SA accordingly provides no warranty that the data in the Consultant's report or any other referenced reports are correct or accurate. SA has not performed an independent site evaluation. Comments and recommendations presented herein are provided to aid Draper City in reducing risks from geologic hazards and to protect public health, safety, and welfare.

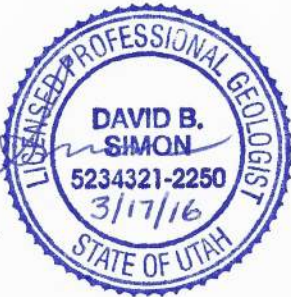
All services performed by SA for this review were provided for the exclusive use and benefit of Draper City; no other person or entity may or is entitled to use or rely upon any of the information or reports generated by SA as a result of this review. SA would be pleased to meet with Draper City and/or the Consultant, at a mutually convenient time, to discuss any of the issues presented herein. In the meantime, should you have any questions, please feel free to contact the undersigned. The opportunity to be of service to Draper City is appreciated.

Very truly yours,

SA



David B. Simon, P.G.
Principal Geologist
DBS/AOT



Dist: 1/addressee
1/Jennifer Jastremsky (Draper City)
1/ Angie Olsen (Draper City)
1/Brandon Watson (Edge Homes)
1/Justin Whitmer (IGES)
1/ Chuck Payton (IGES)
1/Pete Doumit (IGES)

Encl: Portion of geologic map from Biek, 2005a
IGES Figure R-2

References Cited

Biek, R.F., 2005a, Geologic map of the Lehi quadrangle and part of the Timpanogos Cave quadrangle, Salt Lake and Utah counties, Utah: Utah Geological Survey Map 210, scale 1:24,000.

_____, 2005b, The Traverse Mountains, new geologic maps and explosive suburban growth, in Utah Geological Survey Notes vol. 37, No. 2, pp. 1-5.
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<http://ut-drapercity.civicplus.com/documentcenter/view/379>

IGES, 2015, IGES Report, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated September 23, 2015: prepared for Wasatch Land Company, LLC, PO Box 216, Orem, Utah 84059.

_____, 2016a, IGES Second Review Response – Geology, Geotechnical & Geologic Hazard Investigation, Hidden Canyon Estates, SunCrest Development, Draper, Utah (IGES Project No. 01965-017), dated February 3, 2016, prepared for Wasatch Land Company, P.O. Box 216, Orem, Utah 84059.

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McCalpin, J.P., 2003, Landslide inventory map of the SunCrest development, Draper, Utah, GEO-HAZ Consulting, Inc., Project No. 2082, dated November 30, 2003.

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Personius, S.F. and Scott, W.E., 1992, Surficial geologic map of the Salt Lake City segment and parts of adjacent segments of the Wasatch fault zone, Davis, Salt Lake and Utah counties, Utah: U.S. Geological Survey Miscellaneous Investigation Series Map I-2106, 2 plates, scale: 1:50,000. http://ugspub.nr.utah.gov/publications/united_states_geological_survey/geologic_maps/i/i-2106.pdf

PSI, 2004a, Professional Service Industries, Inc. (2779 South 600 West, Salt Lake City, UT 84115), Landslide inventory map of Suncrest, Draper, Utah (PSI project #710-45007), dated February 11, 2004: prepared by GEO-HAZ Consulting, Inc., P.O. Box 837, Crestone, CO 81131 (GEO-HAZ Project #2082-2).

_____, 2004b, Professional Service Industries, Inc. (2779 South 600 West, Salt Lake City, UT 84115), Geology and geologic hazards of the Suncrest project, Draper, Utah (PSI project #710-45010), dated February 13, 2004: prepared by GEO-HAZ Consulting, Inc., P.O. Box 837, Crestone, CO 81131 (GEO-HAZ Project #2091).

SA, 2015a, Geologic Review Letter, Hidden Canyon Estates, Southeast Corner Section 10, T4S, R1E, Draper, Utah (SA Project No: 15-129), dated November 16, 2015, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

_____, 2015b, Project Memorandum - Geologic field review, Hidden Canyon Estates, Southeast Corner of Section 10, T4S, R1E, Draper, Utah (SA Project No: 15-129), dated August 12, 2015, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

_____, 2015c, Memorandum for correction to project memorandum - geologic field review, Hidden Canyon Estates, Southeast Corner of Section 10, T4S, R1E, Draper, Utah (SA Project No: 15-129), dated August 28, 2015, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

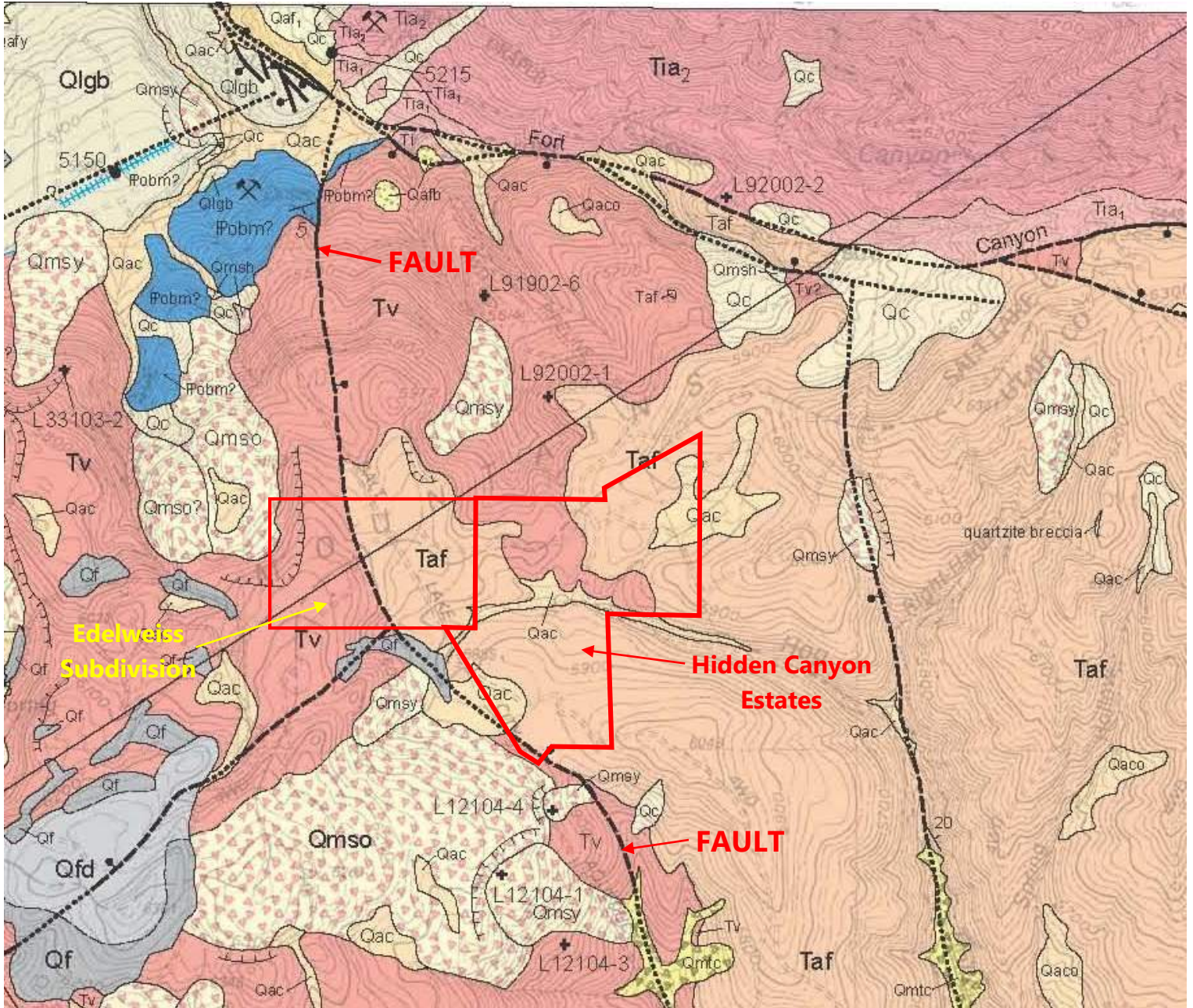
_____, 2015d, Memorandum for scoping meeting, May 5, 2015, Hidden Canyon Estates, Northeast of 14919 South Winged Bluff Drive, Draper, Utah (SA Project No: 15-129), dated May 15, 2015, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

_____, 2015e, Memorandum for project meeting on August 18, 2015, Hidden Canyon Estates 120± Acres in southeast corner Sec. 10, T4S, R1E, Draper, Utah (SA Project No: 15-129), dated September 14, 2015, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

_____, 2016a, Geologic Review, Hidden Canyon Estates, Southeast Corner Section 10, T4S, R1E, Draper, Utah (SA Project No: 15-129), dated January 21, 2016, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

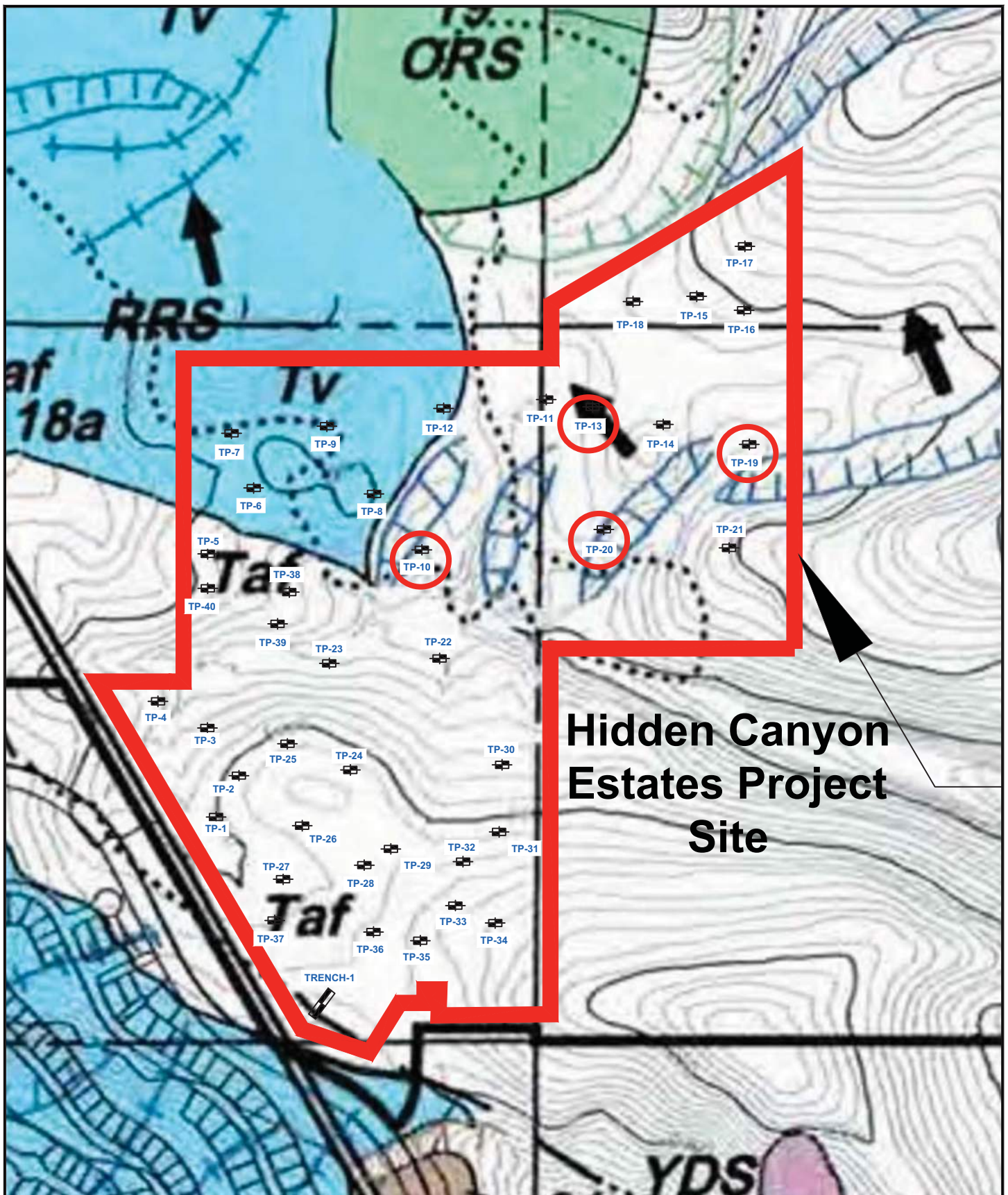
_____, 2016b, Memorandum for Project Meeting on January 29, 2016, Hidden Canyon Estates, 120± Acres in southeast corner Sec. 10, T4S, R1E, Draper, Utah (SA Project No: 15-129), dated February 2, 2016, prepared for Mr. Keith Collier, Chief Building Official, Draper City, 1020 East Pioneer Road, Draper, Utah 84020.

Utah Geological Survey, 2016, On-line interactive aerial imagery collection.
<https://geodata.geology.utah.gov/imagery>



Geologic Review No. 3
Hidden Canyon Estates
Southeast Corner Section 10, T4S, R1E
Draper, Utah
March 17, 2016

reference: portion of Biek, R.F., 2005, Geologic map of the Lehi quadrangle and part of the Timpanogos Cave quadrangle, Salt Lake and Utah counties, Utah: Utah Geological Survey Map 210, scale 1:24,000.



Hidden Canyon Estates Project Site

BASE MAP:
Reproduced from
McCalpin (2004). Map
courtesy of Draper City.

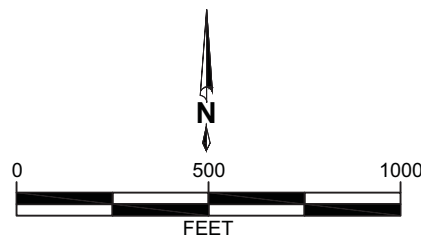
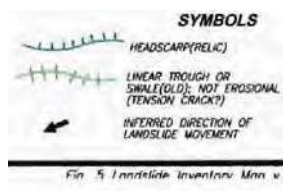


FIGURE R-2

RELICT HEADSCARP MAP

HIDDEN CANYON ESTATES
DRAPER, UTAH
GEOLOGIC HAZARD ASSESSMENT

DATE: 01/25/2016
PROJECT: 01965-017

SCALE:
1"=500'



EXHIBIT K
PROPOSED STREET CROSS SECTION

HIDDEN CANYON ESTATES

PRELIMINARY PLAT SUBMITTAL PACKAGE



CONSTRUCTION NOTES

GENERAL NOTES:

- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH DRAPER CITY STANDARDS AND SPECIFICATIONS. SEE SEWER AND WATERLINE NOTES FOR ADDITIONAL REQUIREMENTS. CONTRACTOR TO OBTAIN CURRENT STANDARDS AT DRAPER CITY.
- CONTRACTOR RESPONSIBLE FOR PROTECTION OF ALL UTILITIES SHOWN OR NOT SHOWN.
- CONTRACTORS SHALL ATTEND ALL PRE-CONSTRUCTION CONFERENCES AND ABIDE BY DIRECTIVES AND DECISIONS MADE THEREIN.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC SAFETY AND OSHA STANDARDS.
- LOCATION AND INSTALLATION OF GAS, POWER, TELEPHONE, AND CABLE LINES TO BE DONE IN ACCORDANCE WITH LOCAL STANDARDS.
- CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS FOR WORK.
- CONTRACTOR IS RESPONSIBLE TO KEEP A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SW3P) AND THE UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT ON SITE DURING THE COURSE OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THESE STATE REQUIRED DOCUMENTS.
- WHEN INSTALLING PROPOSED UTILITIES, CONTRACTOR TO IDENTIFY POTENTIAL CONFLICTS BETWEEN STORM DRAIN, CULINARY WATER, AND/OR SECONDARY WATER. IN ALL CASES, STORM DRAIN DESIGN SHALL GOVERN.
- IF CONSTRUCTION WORK IS IN EXISTING ASPHALT AREAS, CONTRACTOR TO SAWCUT EXISTING ASPHALT FOR MATCH.
- THE BENCHMARK FOR THIS PROJECT IS THE CENTER OF SECTION 7, HAVING AN ELEVATION OF 4823.21'.

WATERLINE NOTES:

- CULINARY WATER SYSTEMS TO BE CONSTRUCTED PER DRAPER CITY STANDARDS AND SPECIFICATIONS.
- CULINARY WATERLINES TO BE PVC C-900 DR14 (CLASS 305 P.S.I.) UNLESS OTHERWISE NOTED.
- CULINARY WATERLINES SHALL BE 8" MINIMUM SIZE. FIRE SERVICE LATERALS SHALL BE 2". SERVICE LATERALS SHALL BE 1", 1.5", OR 2".
- ALL CULINARY WATERLINES SHALL BE 60" BELOW FINISHED GRADE TO TOP OF PIPE.
- ALL VALVE COVERS TO BE RAISED OR LOWERED TO FINISHED GRADE.
- CULINARY WATER SERVICE LATERALS TO INCLUDE BRASS SADDLE; BALL CORP. STOP; 1", 1.5" OR 2" LATERAL, METER YOKE WITH LOCKING WINGS, DOUBLE CHECK VALVE BACKFLOW PREVENTION DEVICE; CONCRETE OR ADS METER PIT OR VAULT; AND C.I. RING AND COVER, PER DRAPER CITY AND AWWA STANDARDS.
- CONTRACTOR TO NOTIFY DRAPER CITY FOR CHLORINE TEST PRIOR TO FLUSHING LINES. CHLORINE TESTING TO BE DONE IN ACCORDANCE WITH DRAPER CITY STANDARDS AND SPECIFICATIONS.
- WATER LATERALS TO BE STUBBED 2 TO 5 FEET FROM STRUCTURE AND MARKED WITH A TREATED 2X4 PAINTED BLUE.
- CONTRACTOR TO ADJUST DEPTH OF WATERLINE TO CLEAR STORM DRAIN AND SEWER LINES UPON APPROVAL FROM DRAPER CITY INSPECTORS.
- THE LAST 9 FEET OF PIPE BEFORE THE FIRE HYDRANTS IS TO BE DUCTILE IRON PIPE (CLASS 52), INSTALL A LEB REDUCER FROM THE DUCTILE IRON PIPE TO THE FIRE HYDRANT. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY-WRAPPED.
- WATER LINE TRENCHES ARE TO BE BACKFILLED WITH ENGINEER APPROVED SELECT BACKFILL AND COMPACTED TO 95% OF THE MODIFIED PROCTOR IN THE ROAD WAYS AND PARKING AREAS, AND 90% IN LANDSCAPE AREAS.
- THE DECISION TO LOOP OR ROPE THE WATER MAIN TO AVOID CONFLICT SHALL BE AT THE DISCRETION OF THE DRAPER CITY INSPECTOR
- DETECTOR CHECK VALVES SHALL BE INSTALLED INSIDE THE BUILDINGS ON ALL FIRE LINES. DRAPER CITY SHALL INSPECT ALL BACKFLOW DEVICES ON FIRE LINES AND IRRIGATION CONNECTIONS.
- WATERLINE SHALL NOT CROSS UNDER SANITARY SEWER OR SHALL COMPLY WITH UTAH DRINKING WATER STANDARDS.

SEWER NOTES:

- ALL SANITARY SEWER CONSTRUCTION AND MATERIALS SHALL CONFORM TO SOUTH VALLEY SEWER DISTRICT STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND COMPLYING WITH THE LATEST VERSIONS OF THESE STANDARDS AND SPECIFICATIONS.
- ALL MANHOLE LIDS TO BE RAISED OR LOWERED TO FINISHED GRADE.
- SEWER LATERALS TO BE STUBBED 2 TO 5 FEET FROM BUILDING AND MARKED WITH A TREATED 2X4 PAINTED GREEN.
- SEWER PIPE TO BE 8" PVC ASTM 3034 SDR 35, UNLESS OTHERWISE NOTED.
- ALL SEWER TO BE BACKFILLED WITH DISTRICT APPROVED SELECT BACKFILL, AND COMPACTED PER DISTRICT STANDARDS.
- SEWER LATERALS TO BE TIED DIRECTLY TO MANHOLES WHENEVER PRACTICAL.
- CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATION OF EXISTING MANHOLES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTION ANY NEW SEWER LINES.
- FOUR FEET OF COVER IS REQUIRED OVER ALL SEWER LINES.

STORM DRAIN NOTES:

- ALL STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III (ASTM C76) OR APPROVED EQUAL AS DETERMINED BY THE DESIGN ENGINEER, UNLESS OTHERWISE NOTED.
- ALL STORM DRAIN JOINTS ARE TO BE RATED TO 13 PSI.
- STORM DRAIN TRENCHES ARE TO BE BACKFILLED WITH ENGINEER APPROVED SELECT BACKFILL AND COMPACTED TO 95% OF THE MODIFIED PROCTOR IN THE ROAD WAYS AND PARKING AREAS, AND 90% IN LANDSCAPE AREAS.

GRADING NOTES:

- TOPSOIL SHALL BE REMOVED FROM THE SITE WHERE STRUCTURES OR PAVEMENT ARE TO BE PLACED.
- STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR, FILL IN LANDSCAPED AREAS SHALL BE COMPACTED TO 90% OF THE MODIFIED PROCTOR.
- A SITE SPECIFIC GEOTECHNICAL REPORT HAS BEEN PREPARED FOR THIS PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE GEOTECHNICAL REPORT AND COMPLYING WITH THE RECOMMENDATIONS CONTAINED THEREIN.
- SOILS THAT ARE OBSERVED TO RUT OR DEFLECT GREATER THAN ONE INCH UNDER A MOVING LOAD SHOULD BE OVER-EXCAVATED DOWN TO FIRM UNDISTURBED NATIVE SOILS AND BACKFILLED WITH PROPERLY PLACED AND COMPACTED STRUCTURAL FILL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. A DRAPER CITY INSPECTOR SHALL BE PRESENT FOR THE PROOF ROLL.
- ALL UTILITIES ENCOUNTERED IN EXCAVATING SHALL BE CAREFULLY SUPPORTED, MAINTAINED, AND PROTECTED DURING CONSTRUCTION IN ACCORDANCE WITH OSHA REGULATIONS.
- BOULDERS AND COBBLES LARGER THAN SIX INCHES SHALL BE REMOVED FROM TRENCHES.
- ALL PIPING SHALL BE PROTECTED FROM LATERAL DISPLACEMENT AND POSSIBLE DAMAGE RESULTING FROM IMPACT OR UNBALANCED LOADING DURING BACKFILLING OPERATIONS BY BEING ADEQUATELY BEDDED.
- THE GEOTECHNICAL ENGINEER SHALL BE NOTIFIED IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION.

CONTACT LIST

OWNER
EDGE HOMES
801-913-7028
CONTACT: BRANDON WATSON

DESIGN ENGINEER:
WILDING ENGINEERING
(801) 553-8112
CONTACT: GREG WILDING

REGULATORY AGENCIES
DRAPER CITY PLANNING
(801) 576-6328
CONTACT: JENNIFER JASTREMSKY

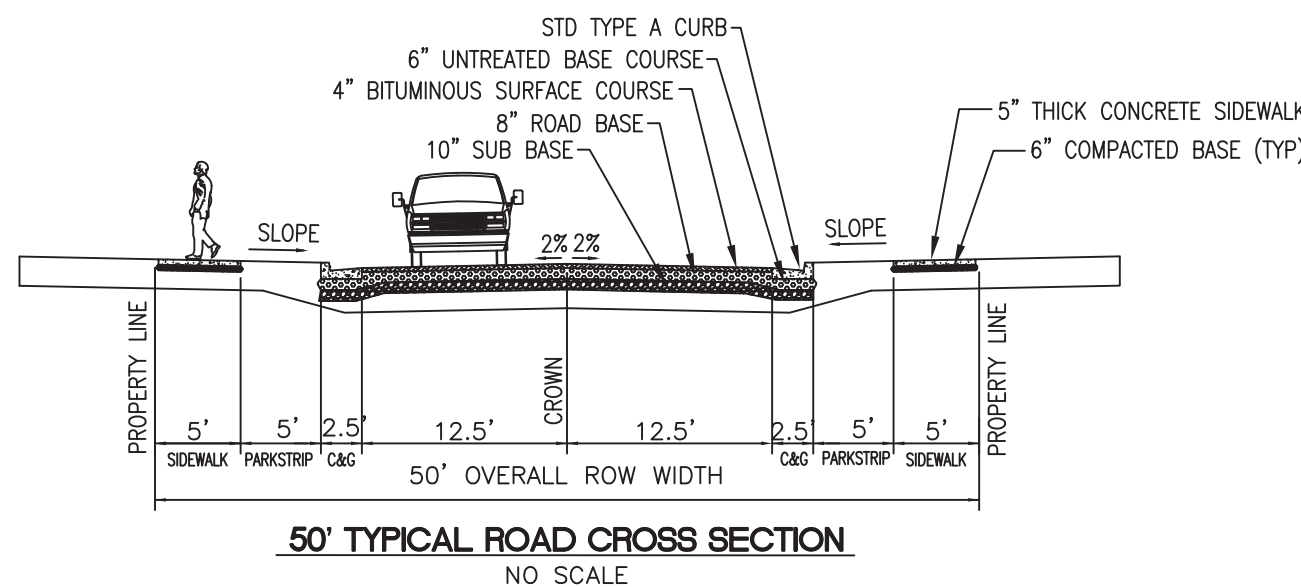
DRAPER CITY ENGINEERING
(801) 576-6556
CONTACT: BRIEN MAXFIELD, PE

SOUTH VALLEY SEWER
(801) 571-1166
CONTACT: MIKE FOERSTER, PE

DRAWING INDEX

SHEET	DESCRIPTION
	TITLE SHEET
	PLATS AND SURVEYS
1 OF 1	RECORD OF SURVEY
1 OF 5	PRELIMINARY PLAT
2 OF 5	PRELIMINARY PLAT
3 OF 5	PRELIMINARY PLAT
4 OF 5	PRELIMINARY PLAT
5 OF 5	PRELIMINARY PLAT
	DEVELOPMENT PLANS
C201	SUNCREST DRIVE STRIPING AND UTILITY PLAN
C202	OVERALL UTILITY PLAN
C203	OVERALL GRADING PLAN
C204	GRADING PLAN SHEET 1
C205	GRADING PLAN SHEET 2
C206	GRADING PLAN SHEET 3
C207	OVERALL EROSION CONTROL PLAN
C208	OVERALL ADDRESSING PLAN
C301	DETAIL SHEET
C302	DETAIL SHEET
C303	DETAIL SHEET

TYPICAL ROAD CROSS-SECTION



PROJECT DATUM

PROJECT BASIS OF BEARINGS
THE BASIS OF BEARING FOR THIS PROJECT IS SOUTH 89°49'39" WEST FROM THE SOUTH QUARTER CORNER TO THE SOUTHWEST CORNER OF SECTION 10, TOWNSHIP 4 SOUTH, RANGE 1 EAST, SALT LAKE BASE AND MERIDIAN.

PROJECT BENCHMARK
THE BENCHMARK FOR THIS PROJECT IS THE SOUTHWEST CORNER OF SECTION 10, TOWNSHIP 4 SOUTH, RANGE 1 EAST, WITH ELEVATION OF 6072.26

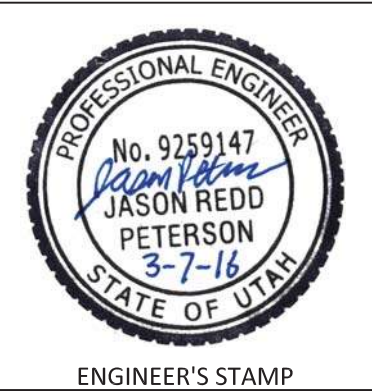


EXHIBIT L
CITY STREET CROSS SECTION

Figure 4- 1: Cross Section, Valley Local Street

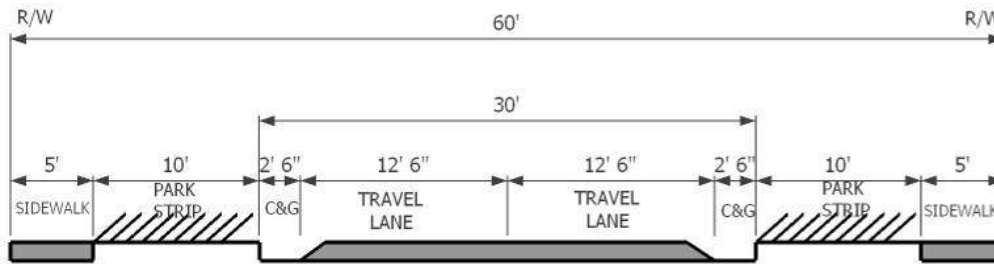
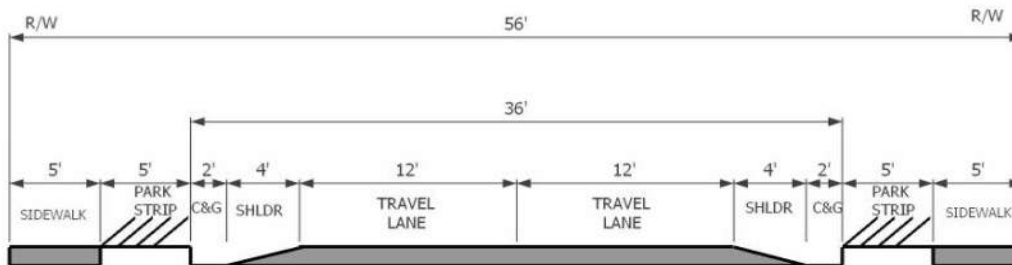


Figure 4- 2: Cross Section, Mountain Local Street



Minor Collectors – 66 feet

Minor Collector streets within Draper serve local trips and provide local access. Minor Collectors are designated as:

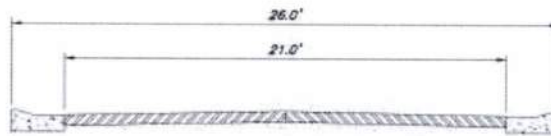
- commercial minor collectors,
- residential minor collectors,
- or downtown minor collectors.

All Minor Collectors have one through travel lane in each direction, park strips/swales, and sidewalks within a 66 foot right-of-way. The sidewalks may be widened by up to three feet on each side with a corresponding reduction of the park strips. This may be necessary where a continuous sidewalk is provided between adjacent properties or in areas where a separate trail is required. Planned Minor Collectors are shown in Figure 4-3.

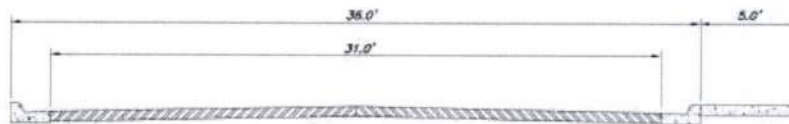
EXHIBIT M
EDELWEISS APPROVED STREET CROSS SECTION

Exhibit B
Cross-Section Comparison

White Petal Court –Private



Silver Flower Lane – Public Road



Stoneleigh Heights Drive, Snow Blossom Way, Ravine Rock, Snowy Peak Drive, Snowcap Court
Public Roads

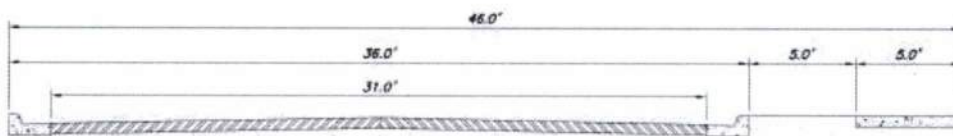
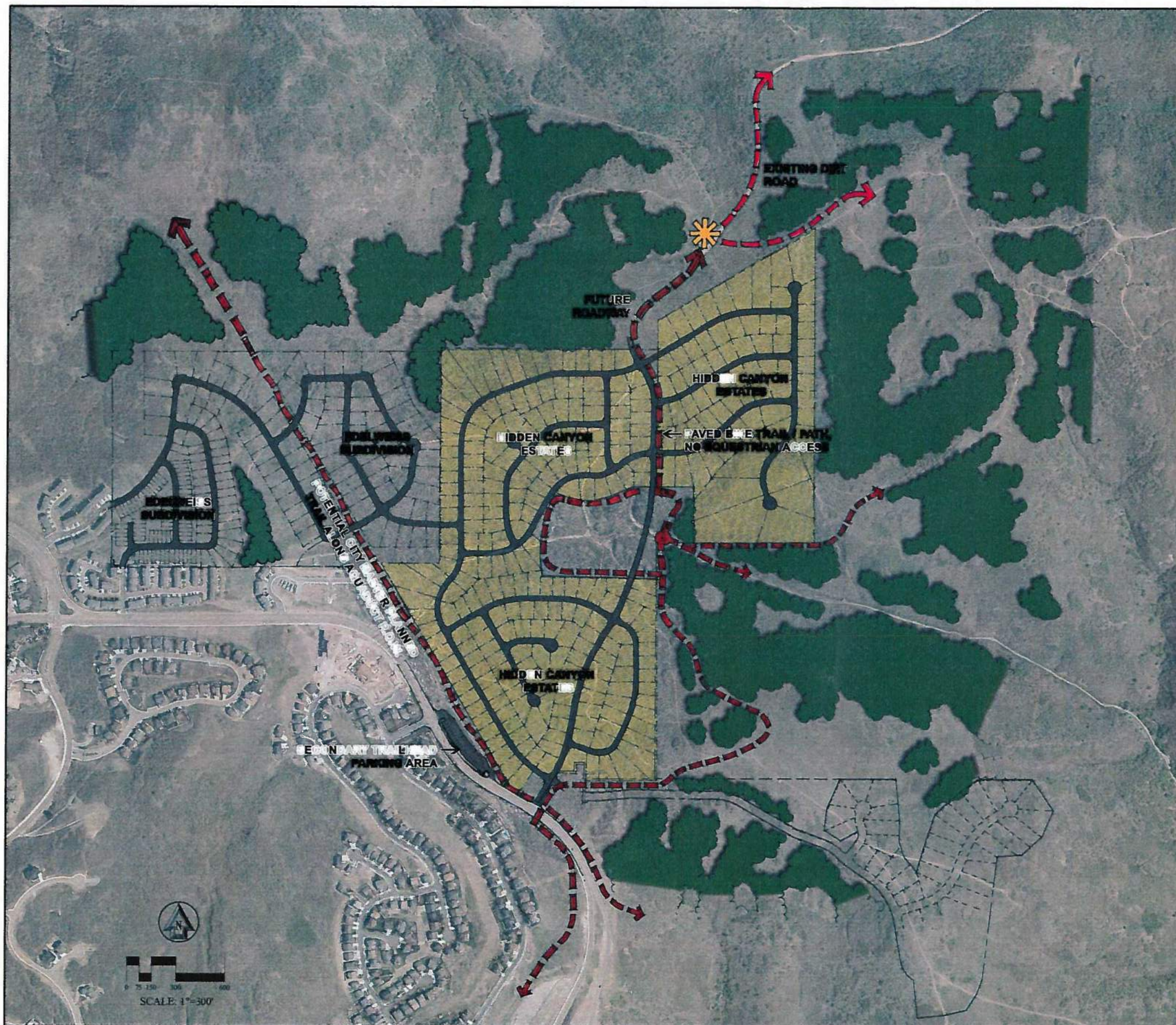
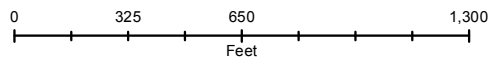
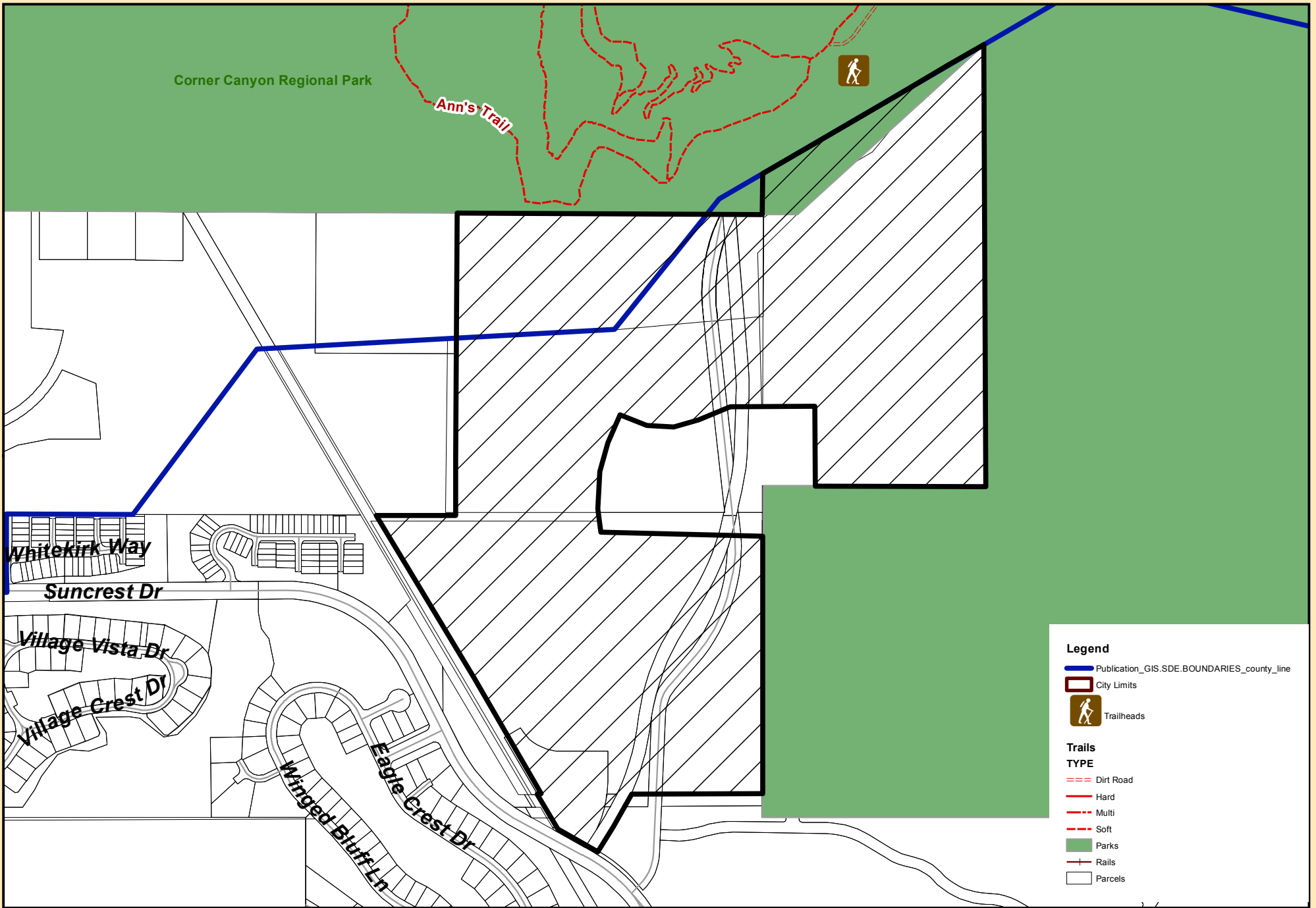


EXHIBIT N
TRAILS AND OPEN SPACE PLAN



RECEIVED

EXHIBIT P
DRAPER CITY PARKS AND TRAILS MAP



Note: Approximate Location

Hidden Canyon Estates Parks and Trails Map

